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THE PSYCHIATRIC QUARTERLY

(SUCCESSOR TO THE STATE HOSPITAL QUARTERLY)

Malarial Therapy and the Prophylaxis of

Psychoses Among Criminals

Psychoses Due to Thyroid Toxemia With Special Reference to

A Study of a Manic-Depressive

Some Aspects of Metabolism in Alcoholism

The Relation Between Brain and Liver Work

Crossroads in Occupational Therapy

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Mental Disease Among Jews

Increase of Patients in the Civil State Hospital

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MALARIAL THERAPY AND THE PRE-PARETIC

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Since its inception in 1917 by Professor Wagner-Jauregg, malarial treatment of general paralysis has come into general favor. At first it was utilized in well defined cases of the disease showing various stages of mental deterioration. Since then the scope of its application has widened gradually. A feeling has become predominant that the earlier a case of central nervous system syphilis is dealt with, the greater promise there will be of preventing the tragic sequelae so familiar in our institutions.

The hope that has been inspired by the results of the malarial treatment has induced a further study of syphilis in all its forms so as to determine the reason why one syphilitic should develop general paralysis while another does not.

As many other problems have been solved so will the solution of the "why" of general paralysis appear in time. Early diagnosis is a vital factor in the control of any disease. It is just as essential in general paralysis. Too often is the neurosyphilitic allowed to proceed without recognition to a point where he becomes a liability to his environment and to himself.

According to Solomon¹ "It is undoubtedly true that the majority of cases of symptomatic neurosyphilis in which the symptoms occur 5 to 30 years after infection have shown positive results in the spinal fluid during practically the entire course of the infection."

Evidence as to the involvement of the central nervous system during the stage of pre-exanthematous syphilis was found by many observers. Wile and Hasley² demonstrated 22 per cent of their cases as showing abnormal spinal fluids. Cornaz³ found 35 per cent, Nicolau⁴ 9 per cent and Leyburg⁵ 7.8 per cent of cases as having pathological findings. In the series of the three latter observers the abnormal deviation consisted of an increased cell count.

During the secondary stage the percentage of cases showing involvement as judged by the spinal fluid abnormalities increases markedly. Stokes and McFarland⁶ found 60 to 70 per cent of fluids showing variation from the normal in untreated cases. This percentage fell to 40 in six months and to 25 to 30 per cent in a year's

time. Fordyce and Rosen⁷ came to the same conclusion. Moore⁸ in a study of 352 cases with primary or secondary syphilis found 26 per cent neurosyphilitics of which 75 per cent were asymptomatic and only to be detected by means of the spinal fluid. According to Leyburg⁵ examination of the spinal fluid during the first two years of a luetic infection gave the most valuable information. It was during this period that his series of cases, treated and untreated, showed the greater number having abnormalities of the fluid present. He also found that pathological spinal fluid with negative blood Wassermann was more often met with in this stage than earlier or later.

From Stokes and McFarland's⁶ results there is evidence that a large number of syphilitics have the ability to establish a resistance to the central nervous infection sufficiently strong to overcome it.

Keidel⁹ from his observations reached the conclusion that "Since neural invasion occurs in probably all cases of early syphilis, and the incidence of late symptomatic and asymptomatic neurosyphilis is limited, it is probable, if not certain, that immune reactions protect the neuraxis. The character of the early tissue reactions to syphilitic infection, the intensity, continuity and duration of the therapeutic attack, * * * markedly modify the incidence of neurosyphilis, both clinical and asymptomatic."

Solomon¹ in his article on the spinal fluid in syphilis shows that in contra-distinction to the findings in fully developed late neurosyphilitics the abnormalities in early cases do not present the uniformity of formulae which are considered pathognomonic in cases of general paralysis, tabes dorsalis or cerebral syphilis.

Some of these cases will show all tests positive but very weakly. Others will have one or more of the tests strongly positive with the remainder weak or negative. A few cases may even give a formula which is strikingly similar to the one found in paresis.

The following table which is by Moore⁸ shows this variation graphically:

Too frequently is the blood Wassermann only examined. Stokes and McFarland⁶ showed in their series that 5 to 8 per cent in early cases and 14 to 41 per cent in late cases of syphilis will show negative blood but abnormal spinal fluids. Kafka¹⁰ found in general paralysis that in 18.7 per cent of his cases where both blood and

Wassermann Reaction	Cells	Globulin	Gold Sol	Mastic
Negative	10	++	2211100000	3221000000
Negative	21	+	0011100000	2210000000
Positive—1.c.c.	8	++	3433210000	5543200000
Positive—0.2c.c.	14	+++	2222200000	4322200000
Negative	4	±	4433321000	4321000000
Positive—0.2c.c.	98	+++	5555543000	5532100000

spinal fluid Wassermann tests were made that the blood findings were negative and the spinal fluid positive.

The conclusion must, therefore, be drawn that in the detection of persistent infection of the central nervous system the examination of the spinal fluid offers the greatest guide.^{7, 8, 9, 11.}

After the secondary manifestations the patient enters upon the so-called latent period of syphilis. It is during this time that treatment is often stopped and the individual allowed to resume his occupation. The infection, if it has not been eradicated by very thorough treatment, now proceeds to "dig in." The period of latency varies. In some individuals, within one to two years symptomatic neurosyphilis develops; in others the interval may be 5 to 10 to 20 years.

Whether the disease has a latent period or not, there should never be "latency" in the treatment or observation of the case. The most valuable guide to the progress of the patient is by examination of the spinal fluid, not once or twice, but repeated at regular intervals. Moore¹³ in a study of 642 treated cases of syphilis examined the spinal fluid after two to six months' treatment. He found when primary cases were treated only 2.9 per cent showed abnormalities. After secondary manifestations developed 12 to 15 per cent showed pathological variations. Of the 642 patients only 12.7 per cent showed abnormalities. This shows the influence of early treat-

ment in reducing the incidence of asymptomatic neurosyphilis from 26 per cent as found in untreated cases.

The physician who first treats a case of syphilis must accept the responsibility of guarding his patient against future dangers. It is not sufficient to diagnose the case as syphilis. Every case whether presenting mental or nervous symptoms or not must be thoroughly investigated. This has not been done if examination of the blood and spinal fluid has been neglected. The technique of lumbar puncture is so simple and the slight inconvenience so small in comparison with the information gained that it is almost incomprehensible why such valuable diagnostic aids are omitted.

This examination is again advisable after the first course of treatment and also before the patient is discharged. This latter should not be done until the spinal fluid has been negative for some months. It should then be a matter of routine that the spinal fluid be reexamined, 15 to 18 months later.¹²

During the secondary stage certain individuals may have already demonstrated their tendency to become psychotic. At this time the manifestations may simulate various syndromes such as confusional, manic, either depressive or manic.¹⁴

Such cases may either be placed under institutional care or else treated at home. There is the greatest danger of these cases being classified as functional psychoses where if a serological examination of the fluid were done they would be correctly diagnosed and treatment instituted before severe cortical damage had occurred.

The importance of routine spinal fluid examination of every case admitted to psychiatric hospitals cannot be too strongly emphasized. This is illustrated in three of our cases, presenting syndromes which warranted diagnosis, in the first case 1 as manic-depressive, in the second (2) as psychopathic personality with psychosis due to drugs (mercury poisoning), in the sixth (6) (quoted page 128), as an alcoholic, whereas the spinal fluid revealed a more serious condition present.

CASE 1. Male, white, engineer, age 31 on admission to Willard State Hospital in 1923. Family history is negative.

Personal history: He had scarlet fever at the age of nine. His school and home contacts were good. He acquired syphilis in 1917. He received one course of treatment, medication unknown. He was a regular drinker and would become intoxicated periodically.

Onset: This was sudden. The duration was ten days prior to admission. There were hallucinations of sight and hearing. He showed homicidal tendencies. There was excite-

ment and irritability. He kept sending telegrams to various State officials. He showed a marked grandiose trend, outlining many schemes that would be national in their application and produce vast wealth. He showed exaggerated emotional reactions but in response to appropriate topics.

Insight and judgment were lacking.

In attitude and general behavior he was alert, over-active, interfering and would become assaultive. He was very destructive and had to be constantly watched. Nine months after admission there was a marked change in his condition. He showed apprehension, confusion and depression. The hallucinations and delusions were not expressed. He was fearful and anxious. Insomnia was present. Patient became so confused that on several occasions he could not dress himself. Diagnosis was manic-depressive psychosis, manic attack.

One year after admission his condition showed him as quiet, pleasant and agreeable. Mood was rather sad. He was tidy in habits and personal appearance. He was oriented for time, place and person. His physical condition had improved slightly. He was paroled 18 months after admission. Remained on parole for 9 months when he had a severe convulsion. He presented on his return a mental picture quite similar to his initial one. In addition he showed a neurological involvement. The pupils were unequal in size. There was tremor of the face and tongue. There was a disturbance of speech. A diagnosis was then made of general paralysis, cerebral type. The serological findings were: Blood Wassermann positive 4 plus in both antigens. The spinal fluid Wassermann was positive 4 plus in both antigens. The cell count was 22 per ccm. The globulin showed a definite increase. A spinal fluid examination on the occasion of his first admission would have placed this patient under correct therapy.

CASE 2. Age 19 on admission in 1926 to Willard State Hospital. Male, white, occupation none.

Personal history: This patient had been incorrigible and resentful of discipline throughout childhood and early youth. He was given to telling exaggerated dramatic stories. He has had a severe criminal record since 1923. During prison service he committed many perverted sexual acts. In 1925 he contracted gonorrhea and probably about this time syphilis. A blood Wassermann test was found to be positive 4 plus when he reported for treatment of the gonorrhea. He denied both primary sore and secondary signs.

Onset: This was three days prior to admission to this hospital. He showed lapse of memory, irritability, uncontrollable temper and assaultiveness. He was completely disoriented. It was observed that this followed treatment with mercury. On admission to this hospital he was confused. Disorientation was still present. This lasted for about two weeks when he cleared up completely. While not depressed, he expressed hopelessness as to any possibility of curing his syphilis. Occasionally he would show mild elation and excitement and would talk very freely. Neurologically he showed: Pupils irregular, left larger than right, both reacting promptly to light but contraction not sustained. Test phrases were slurred. There was some swaying during the Romberg test. Writing was slurred and showed elisions. The blood examination showed a positive Wassermann 3 plus in the alcoholic and 4 plus in the cholesterinized antigen. The spinal fluid showed the Wassermann 4 plus in both antigens. There was a definite increase in globulin. The cell count was 7 per ccm.

Arsenical therapy was employed until he could be inoculated with malaria. He reacted well to the latter and has improved so rapidly and to such marked degree that he has been discharged from the hospital.

Christian¹⁵ in an examination of 1,500 unselected patients at the Morris Plains State Hospital, New Jersey, found 12.5 per cent with

positive Wassermann in the spinal fluid. Of this group 26.2 per cent showed as clinical neurosyphilitics; 17.6 per cent were general paralytics, the remaining 8.6 per cent being various other types of neurosyphilis; 73.8 per cent of those cases showing positive Wassermann were asymptomatic and only found by means of spinal fluid examination.

Marie and Levaditi¹⁶ studied the blood Wassermann findings in their admitted cases with all types of psychoses for the year 1921-1922. Their findings were recorded in a table which is cited below.

Psychosis	Positive	Negative	Total	Percentage
Dementia præcox and similar paranoïds	3	21	24	12.50
Manic-depressive and melancholy state	11	52	63	17.46
Toxic forms	5	20	25	20.00
Organic and senile dementia.....	2	7	9	22.22
Epileptic types	3	9	12	25.00
Pseudo general paralysis, tabes, arteritis and local lesion	9	26	35	25.71
Degeneration and constitutional psychosis	14	32	46	30.45
Confusion and acute manic delirium...	9	11	20	45.00
General paralysis	56	178	234	24.78
	57	4	61	93.44
Total	113	182	295	38.60

Of all cases of persistent neurosyphilis, part will develop cerebral syphilis with its various types, either arterial, meningeal, of either base or convexity, or localizing gummatous forms. These cases are, of course, distinct from the parietic but they may also become psychotic. It is because of this that they are included here. They must be differentiated from the general paralytic. Their treatment is just as severe a problem. The various chemotherapeutic agencies at our disposal have proven their great value. The effectivity of treatment will be enhanced if carried out in the early stages before the occurrence of coarse lesions which are likely to cause severe crippling.

Cerebral syphilis is characterized by its multiplicity of symptoms with their frequent transient nature and the changefulness of the clinical picture at different stages of the disease. Among the earliest of symptoms will be headache. This is usually severe and may be so intense as to stupefy. The patient may show vertigo and nausea with these headaches.

The neurological disturbances show many manifestations. These may come on suddenly, early in the course of the disease, that is, within a few months, or may show any time within the next 5 to 10 years. The vast variety of the syndromes presented require the alertness of every examiner. There may be paralyzes or pareses, either transitory and minimal in extent or permanent and severe. The anatomical localization of the cerebral lesion will naturally determine the symptom present.

Minor speech disturbances, facial muscle tremors, transient nerve palsies, various degrees of deafness, some slight diminution of vision and pupillary anomalies will be evidence of the meningo-encephalitic process. The speech disturbance tends to be slurring rather than elisions or interruptions.

The mental reaction will show confusion, listlessness, depression, anxiety and worry. The memory defect tends to be of the aphasic type. There may also be irritability, increased fatigability, and loss of interest in his work. Occasionally delirium may appear with complete disorientation and visual hallucinations. Any of the mental disturbances may become so severe as to pass into dementia.^{17, 18.}

In cerebral syphilis the response of the spinal fluid to the five tests shows a different type of reaction than in general paralysis.

Solomon¹ gives the following findings as most typical:

The Wassermann reaction is weaker. In 0.2 cc. dilution about 40 per cent are found to be negative. It is often negative in dilutions of 0.4 and 0.6 cc.

The cell count will vary as to the acuteness or chronicity of the process. In the acute cases the count may be from 200 to 2,000 cells, in the chronic cases the variation may be from 0 to 200 or more cells. Lymphocytosis predominates. The plasma cell is rarely found.

The globulin reaction may be negative or strongly positive.

The gold sol curve shows weaker than in general paralysis while the precipitation tends to be in the middle tubes. The total protein tends to be less. The blood Wassermann is positive in about 50 per cent of the cases.

Kagawa¹⁹ found positive spinal fluid Wassermann in 18 per cent, positive blood Wassermann in 54 per cent, positive gold sol curve in 63 per cent and positive globulin reaction in 63 per cent of the cases in his series.

In general paralysis there is a different picture. We find in the history of many cases that the primary sore was either ignored or even never detected. The secondary symptoms also appear less characteristically florid than in tertiary somatic syphilis or cerebral syphilis.²⁰ Leyburg⁵ from his observations concluded that between severe skin lesions and a pathological condition of the spinal fluid there seems to be an antagonism. So it is quite possible that cases which later develop general paralysis may never have had medical attention during the primary and secondary stages where the chances of successful aid were so much greater. If, however, the case has sought treatment the problem is easier. He can be kept under observation and his progress noted by the repeated examination of the spinal fluid.

The majority of cases of general paralysis will show a much longer delayed onset than in cerebral syphilis. Whereas the latter generally appears within five years after infection (Naunyn states that 50 per cent of cases do so), general paralysis on the other hand is characterized by its long period of apparent immunity from symptoms. This is variously estimated but it is generally agreed that it is from 10 to 15 to 20 years after the acquisition of the disease.²¹

During this apparently latent period there will be evidences of the central nervous disease which if recognized would bring the patient

under observation and treatment before too much damage has been done.

The neurological involvement tends to be insidious in its development. The eyes will present changes such as small differences in the size of the pupils, lessened visual fields, and slight sluggishness in response to light. These tend to become increasingly severe until in due course of time the fully developed Argyll-Robertson pupil is present. The consensual reflex may disappear early or late. Persistent nocturnal headache, insomnia and vertigo will be present at varying stages of the disease. The deep reflexes may be either slightly increased or diminished. The appearance of fine tremors of the face, particularly of the mouth and about the eye, are significant. The tremor of the tongue and the slight blurring and interruption in speech show the further progress of the disease. The mimetic lines seem to undergo a coarsening. The naso-labial folds and the fine lines of the forehead are usually the first to show this. A slight staring expression may be produced by the extra effort required to overcome the beginning ptosis. The patient gives the impression of having had his face padded.

The examination of the blood will reveal a persistent blood Wassermann in 90 per cent of cases according to most observers^{16, 19, 21}. The spinal fluid will show positive Wassermann in 0.2 cc. concentration in about 95 per cent.¹ According to Sicard²² this is true in 100 per cent of the general paralytics. Other authors refer to the colloidal gold test as showing 100 per cent positive and by its reaction to treatment offering a means of diagnosis.¹⁹ Under drug therapy a paretic gold sol curve, appearing in some cases of meningo-vascular syphilis and also in some types of early neurosyphilis may soon clear up but in general paralysis this does not occur.⁷

This paretic curve is characterized by the strong precipitation in the first tubes and in the majority of cases in the middle tubes as well.

An increased number of cells in the spinal fluid will indicate the active process. The cyto-characteristics are lymphocytes and plasma cells. The number present may vary from 10 to 20 to 100 or 200 with an average of 25 to 50 cells. The globulin is positive in about 60 per cent of cases of general paralysis.

The formula of the spinal fluid in general paralysis according to Solomon¹ is quoted in the following table:

Wasserman Reaction	Cells	Total protein	Globulin	Gold sol	
Positive in 0.05 to 0.2 cc. in 95 per cent	0-200+ average	50-150 mgms per 100 cc.	+++	5432100000	weak
Slightly weaker reaction rarely found	25-50	average 89		5554321000	average
				5555555555	strong

The manometric findings in general paralysis may vary greatly.²³
The following table shows this.

MANOMETRIC FINDINGS IN GENERAL PARALYSES
(Figures represent millimeters of mercury)

	Initial pressure	Intra-spinal compression	Jugular compression	New level	Amount withdrawn	Final pressure	Rachidian quotient
1	14	28	50	16	10	10	7.1
2	20	38	48	20	10	15	7.5
3	26	33	84	25	10	16	6.1
4	11	32	46	10	10	6	5.4
5	27	32	58	24	10	22	8.1
6	7	10	42	8	5	3	2.1
7	6	12	12	6	5	3	2.5
8	16	38	40	16	10	12	7.5
9	2	10	10	2	5	0	2.5

CASE 1: Senile and arteriosclerotic changes were marked features.

CASE 2: One year post-malarial. He shows a strong paranoid psychosis now.

CASE 3: This one showed a severe and rapid deterioration mentally, also severe neurological involvement.

CASE 4: There is ataxia and marked speech disturbance present. Pupillary involvement is not severe. Mentally there is memory disturbance for recent events and some slight confusion.

CASE 5: This shows irritability and depression. The Argyll-Robertson pupil is present. There is a left-sided hemiplegia.

CASE 6: There is severe and complete deterioration mentally with severe neurological involvement.

CASE 7: There was severe and complete deterioration mentally. Neurological involvement was severe. This patient had had convulsions 12 hours previous to the puncture. He died 72 hours later in convulsions. Positive Queckenstedt sign is shown by the readings.²⁴

CASE 8: This patient showed excitement, confusion, restlessness and irritability. Slight ataxia, minor pupillary anomalies but marked speech disturbance were present. His sensorium was well preserved.

CASE 9: This patient has shown extreme maniacal excitement since admission. He is rapidly losing weight and is entering a period of exhaustion. Positive Queckenstedt sign was present.

The subjective physical symptoms tend to simulate the neurasthenic. The patient complains of increased tiredness in accomplishing his usual routine. He puts less energy into his work. There may be increased drowsiness. Memory defect may show at first as absent-mindedness and then as definite inability to recall matters of which he should be aware.

There will be minor changes of personality, especially in his attitude toward his surroundings. Usually these alterations are intensifications of existing traits. The patient may perceive all these changes and feels "unsure" of himself, he may compensate for this by a more forceful attitude and boisterousness or else may react with irritability.

As the disease progresses defects of attention may show in the little details of daily habits. Slipshod dress, minor social *faux pas*, or breaks in skillfulness of accomplishing his accustomed duties indicate the loosening of the finer psychical control.

As the deterioration increases, the memory defect becomes more apparent. The intellectual disturbances are thrown into stronger relief. Judgment becomes faulty. It is usually at this stage that some act on the patient's part shows him as having changed from his normal habit of behavior, bringing him into conflict with his environment.

It is regretted that only too often are these cases labelled "neurasthenia", "over-work" given a good tonic and an indulgent dismissal. There is no necessity of waiting for the classical picture to develop to determine the diagnosis. It requires only a thorough examination, mental and neurological, in which an essential factor is a complete biological study of the spinal fluid.

The nature of the malarial therapy is such that it can be employed in the home, in the general hospitals or in the private and public mental institutions. If it is used in the home, it requires a room which can be isolated and properly screened so as to protect against any possibility of transference by the mosquito. In the early cases so treated there is little danger of untoward accidents. The patient would simply be dealt with as an ordinary case of malaria, allowing him to have the necessary number of paroxysms. It is even simpler to deal with these cases in general hospitals where isolation wards can be designed very quickly.

Health authorities in certain European countries have advised against the utilization of this therapy outside of specially equipped hospitals. The reason is that the *Anopheles* mosquito is very widespread in these countries. In the northern states of this country and in Canada such is not the case.

The general public is interested and is gradually developing a more common sense view in regard to disease. A frank explanation is always required as we cannot as yet say that a cure lies in our hands. We can only state our percentage of remissions and emphasize the fact that the patient runs a lessened risk of untoward results the earlier he receives treatment. He must be warned that the syphilitic disease may only be arrested and that further treatment will be required to maintain his improved condition.

Often where cases have been recognized as incipient general paralysis, treatment has been instituted with medicaments which we well know to be ineffective. Time, the value of which can scarcely be computed, and money are wasted in such an effort. The disease progresses in spite of such attempts. This is seen in the following case history.

CASE 3. This is a male, age 40, a traveling salesman by occupation. He was successful in business and in social contacts. There is no history of any mental upsets previous to his psychosis. There is a history of syphilis. He received a primary sore on the lip about 12 to 14 years of age. A blood Wassermann examination was made at that time and showed a positive Wassermann. He received one course of arsenical therapy, amount

and kind unknown. Apparently he got along very comfortably until May, 1927, when he developed an acute psychosis seven days prior to his admission to a private hospital. This was characterized by mild excitement, elation, euphoria and some grandiose ideas. The blood serologically showed a positive Wassermann 4 plus. The spinal fluid showed a positive Wassermann 4 plus. The cell count of the spinal fluid was 40 per ccm. The globulin was 2 plus. From May, 1927, to September, 1927, he received 20 injections of sulpharsphenamine. He was much improved physically. The mental condition now showed insight, some slight depression, no euphoria and no abnormal ideas. He was still slightly over-talkative. He was inoculated with malaria the latter part of September and showed no reaction in two weeks' time. He was allowed to rest a week and was reinoculated and this time showed an excellent response. He was allowed to have 12 paroxysms. The malaria was then terminated. After a month's convalescence he was paroled home. He presents practically a normal picture. He remains under medical care and, no doubt, will eventually be discharged in a highly improved condition.

It is not meant that anti-syphilitic treatment is not to be used. It should be, but must be closely checked by the spinal fluid findings and the clinical picture. When there is no definite and obvious improvement it is then that malarial therapy is indicated.

At this time the patient is still in good physical condition. The cardio-vascular system, although involved in the general systemic reaction has not developed the lesions that constitute the poor risk. The personality is still preserved, insight and judgment have not become defective. There is much less danger of stirring up meningeal irritations or lighting up a series of convulsions, as occurred in several of our cases, two of which are quoted.

CASE 4. This patient was admitted to the Willard State Hospital in September, 1924. A diagnosis of general paralysis of the insane was made. The serological findings were: Blood Wassermann positive 4 plus in both antigens; spinal fluid Wassermann 4 plus in both antigens. The globulin showed a definite increase. The cell count was 31 per ccm. He received four courses of sulpharsphenamine which so improved him that in November, 1925, he was paroled. He returned May 5, 1926, after a series of convulsions. In October, 1926, he was inoculated with the malarial plasmodium. His reaction to this was not good. He showed a steadily rising type of temperature which continued for six days. On the seventh day he showed a paroxysm with a slow type of rise. The fall from this paroxysm took over 12 hours. The temperature did not fall to normal but rose again taking a period of 10 hours to reach its maximum. It then took another 12 hours to fall to 100 degrees. Twenty-four hours later a subnormal temperature developed. The patient was markedly restless and agitated. He was comatose and delirious at intervals. Nutrition could not be maintained because of a disturbed swallowing reflex. There was spasticity of the neck muscles. Kernig's sign was not present. Every attempt was made to terminate the malaria but this succeeded only after 48 hours. Spinal drainage was done. The fluid was found to be negative, bacteriologically. The patient vomited after this drainage. He then became quieter and less restless. The treatment he received was apparently successful in allaying the meningitis which had been produced. The weight loss was severe and he did not regain this. He continued to fail and died one month later from an intercurrent infection of broncho-pneumonia.

CASE 5. This patient was admitted May 5, 1927, with a history of having had convulsions in November, 1925, since which time he has not worked. The diagnosis was general paralysis of the insane. He was inoculated August 26, 1927. He immediately showed a rise in temperature to 101. Temperature then fell to normal and rose again on August 27. On August 31 he had a marked paroxysm, temperature going to 105. At the height of the paroxysms he developed convulsions. These were severe. They involved both sides of the body, the knees being drawn up, the arms flexed and the head deviated to the right. The convulsions were continuous and lasted for four hours. Every attempt was made to control them but without success. As the temperature fell to normal the convulsions ceased and the patient lapsed into coma. He had another paroxysm on September 2 with a repetition of the convulsions. This time he became nauseated and the convulsions ceased. From then until the termination of the therapy he had no further seizures.

The malarial therapy is considered by some to produce its effect by stirring up the latent resistant forces present. If this be true, it is important that this stimulation should be resorted to as early as possible. The biological organization of the individual is then still capable of putting forth almost its normal response.

There is also a better type of clinical response to the malarial infection. The paroxysms seem sharper and more typical of the tertian reaction. The patient does not suffer so severe a drain on his physical resources. Convalescence is shortened by the greater rapidity of improvement after termination of the therapy. A material point is the ability of the patient at this stage of the disease to cooperate in the care of his own case. It is of great assistance clinically when the patient does not get excited and delirious or is not restless and unmanageable because of a psychosis, thereby, increasing the possibilities of secondary infection or accident.

This is shown in the case histories submitted.

CASE 6. Admitted to this hospital in October, 1927, 32 years of age, male, white, married. As a boy apparently normal. School life uneventful. Reached second year of college, entered the army in 1915, and served on the Mexican Border. In 1917 became a sergeant and in 1918 went to France. He was commissioned as second lieutenant and was discharged in 1919. He acquired syphilis in France. He worked two and a half years with an insurance company and one and one half years with a hardware concern. He returned home and worked for one and one half years, being steadily employed until a few months ago. He has had a severe alcoholic history since 1918, drank while he was in the army, and was admitted to Willard State Hospital with an alcoholic psychosis. He had shown a change of personality becoming irresponsible, unreliable, intemperate, violent and abusive. He was reckless in conduct and had little appreciation of right or wrong. He showed marked egocentricity. Within a week he had shown much improvement from his alcoholic psychosis.

During routine examination the blood and spinal fluid Wassermann were found to be positive, the blood being 3 plus and the spinal fluid 4 plus. The globulin showed no increase. The pressure finding showed no increase. The neurological system was negative.

In view of the serological findings and the change of personality it was felt that this case should receive malarial therapy. The nature of the treatment was discussed with the patient. His attitude was, that knowing he had syphilis, his was the responsibility to accept every means of ridding himself of it. The method of therapy was explained to him; he was inoculated October 18, 1927, and has been an ideal patient in every way. He assisted materially in keeping records of the subjective picture. He cooperated with the physicians and nurses in a manner that left nothing to be desired. The active therapy has been terminated but it still remains for psycho-therapy and chemo-therapy to be employed. This has been explained to the patient. He shows realization that no cure is promised, but simply a form of treatment that has shown good results in other cases and should be of help to him. He appreciates the necessity of continuing under medical advice until such day that his spinal fluid is negative and his psychotic difficulties adequately overcome.

CASE 7. This is a patient aged 29, male, white, married, restaurant proprietor.

Family history is negative.

Personal history: No data as to childhood. He started school at the age of six and reached the eighth grade at the age of 13. He has worked at various occupations from messenger boy to waiter in a restaurant and gradually accumulated enough to start himself in business. He was married in 1922. No children. Family life said to be congenial. From 15 years of age he has been a drinker. Three months prior to admission was an extremely heavy drinker. When he was about 16 or 17 years of age he contracted syphilis. He received a course of treatment at that time for about one month and then dropped it. He apparently had no mental symptoms until about three months prior to admission September 14, 1926.

The onset was gradual. The first symptom noticed was loss of interest in business and a desire to sit around home. He became depressed and nervous. He then showed confusion, wandering, defect of orientation and a defect of judgment. He became irritable and attempted to assault his wife and had to be committed. There were no hallucinations but he showed elation, some euphoria evidenced by the expression of ideas that he was a very strong man when really he is small in stature and quite asthenic. His conduct was childish and somewhat silly. He showed a fluctuating reaction to environment, at times being quite indifferent and at other times taking some interest. The emotional reaction showed fluctuation between depression and elation.

The neurological picture was as follows: Knee jerks increased; Romberg positive; coordination poor; gait unsteady; tremor of facial muscles, tongue and fingers; speech defect was very marked. Pupillary reactions: Pupils dilated, reacted promptly to light but showed sluggish rebound, no inequalities of pupil. In the serological findings both the blood and spinal fluid Wassermanns were 4 plus. The globulin was increased. The fluid appeared to be under increased pressure but accurate manometric readings were not obtained.

Patient was inoculated October 30, 1926. Full explanation of the therapy was made to patient prior to inoculation. At first he was confused and did not cooperate well but toward the end of the course he cleared rapidly and was able to render much assistance. Malaria was terminated November 17, 1926. There was steady improvement in the general physical condition and marked improvement in the mental condition. His confusion, disorientation, childish behavior, fluctuation of emotional content disappeared. He was paroled December, 1926. He keeps in contact with his family physician and thoroughly appreciates the situation that he is not a well man as yet and must remain under medical advice for an indefinite period. He reports to the out-patient clinic which notes him as being in good mental and physical condition but not yet employed.

It is suggested in those cases where the disease has progressed to such a level that psychotic defects can be demonstrated, that these individuals should be treated under institutional care. The difficulty lies at this point. The recognition of the warning signals by the physician is not the least of his difficulty. He has to demonstrate them to the patient and to the relatives and still more difficult must persuade these of the necessity of putting the patient under immediate continued, forced treatment. It is admitted that to do this constitutes the severest test of the physician's relationship to his patient. Still it is insisted that these cases must at this stage be given every form of treatment at our disposal to prevent their further deterioration. If the patient from the very beginning of the infection has been trained to accept the advice of his physician, then when it is found that necessity for malarial therapy arises, there will be little difficulty in persuading him to avail himself of it.

There is very definite psychiatric reason why early diagnosis in general paralysis is necessary. Due to the treatment, the progress of the organic disease may be arrested, whether as a long remission or permanently, we do not as yet know. The level of improvement depends greatly upon the amount of deterioration present prior to the therapy. If this be of an advanced type, we may find that after treatment we have a psychotic individual who will still require institutional care. Not only this but in some cases the psychosis will be a distinctly different type with more dangerous implications. This was demonstrated in five of our cases which originally showing a euphoric picture with grandiose trends now present a paranoid syndrome.

CASE 8. Age 50 years on admission to Willard State Hospital in August, 1924.

Family history: Was negative.

Personal history: He came to this country in 1889 and had been employed as a laborer. He was quite efficient at his work, saved money and was successful in maintaining a home. He is said to have had typhoid fever but when is unknown. He contracted syphilis in 1912. He has always had a severe alcoholic history, drinking whiskey mostly. In his contacts he was active, and social. He attended picture shows and took an interest in sports. He attended church regularly. About one year prior to his psychosis it was noticed that he was becoming more nervous and unstable and that his work suffered. This incapacity for work showed a rapid increase during the two months prior to admission.

The onset: The acute onset was given as four weeks prior to admission. He claimed that he had a sunstroke at that time which caused him such marked distress that he had

to stop work. Immediately after this he began to elaborate schemes about bootlegging operations. He was going to organize a vast company for smuggling liquor from Canada. He talked incessantly about these schemes. He was excited and quarrelsome. He claimed that he had tremendous amounts of money and vast quantities of diamonds which he was always going to receive next week. On admission here he showed the same mental picture. In addition he was going to enter suit against his employer for not allowing him a sun shade on his concrete-mixer. He claimed that he was in the very best of health, that there was nothing wrong with him, that he was so strong that he could work night and day. While at this hospital his grandiose ideas kept enlarging. Each one of the physicians was to be given a million dollars and 10 truck loads of whiskey. He was constantly offering bribes of vast sums to the attendants to allow him his freedom so that he could carry on his smuggling operations. In December, 1924, he became quieter, more compliant and orderly. He controled his expansive ideas and was paroled. A physical examination at that time showed him with a severe neurological involvement. The pupils were irregular in outline and unequal, the left being larger than the right. The reaction to light was absent. The consensual reaction was absent. There was irregular lateral nystagmus. The tongue protruded to the left. There were no paralyses or pareses. Coordination was only fair. Balancing was fair. The knee jerks were markedly exaggerated. There was tremor of the face, tongue and fingers. Speech was slurred and showed elisions. The spinal fluid was positive 4 plus in both antigens. The blood Wassermann was positive 4 plus in both antigens. The cell count was 20 per ccm. There was a slight trace of globulin.

He was inoculated with malaria in August, 1926. There was nothing unusual during the course of the therapy and it was duly terminated in September after 15 paroxysms. The convalescent period was about six weeks. He regained all the lost weight. His behavior became quieter, he was more precise in dress, neater and tidier. There was complete disappearance of his expansive ideas. Mood no longer showed a euphoria but rather a slight depression. He argues that he has been cured, that he feels very much improved physically. He does not claim that he is in the best of health nor that he is feeling the strongest man but seems to show that it is a sense of well-being which is normal in content. He now claims that all his troubles are due to his employer in having failed to protect him from the sun, and that the physicians are in league with this employer to unlawfully detain the patient so as to prevent the institution of a lawsuit for damages. The patient does not give expression to this freely nor at all times. It is only when some incident in ward routine has irritated him and he is protesting against being locked up.

CASE 9. Male, age 51, admitted to the Willard State Hospital in December, 1926.

Family history is negative.

Personal history: Studied architecture and was a very successful professional architect.

Onset of psychosis was given as four months previous to admission. He was depressed at times and then excited. He became very untidy. He was unable to attend to his business affairs. He showed marked loss of memory. He became resistive and irritable. There was a history of a syphilitic infection in 1917. Neurological examination showed: Pupils as reacting sluggishly to light, the deep reflexes as very exaggerated, the gait ataxic and coordination poor. The Romberg was positive. There was tremor of the face, tongue and fingers. The speech defect was marked. The blood Wassermann was positive being 3 plus. The spinal fluid was positive being 4 plus. The mental examina-

tion was as follows: He was disoriented for time and person. Retention was poor. Recent memory was very poor. The remote memory showed marked gaps. Although the patient had been in this condition for over four months he claimed that he had been doing many big jobs in Rochester and New York and that he had just been given a contract for 40 houses. He said during the examination, "I have a garden that is the most beautiful thing with 3,000 beautiful flowers, 800 different varieties of Japanese flowers and 648 different kinds of hollyhocks. A garden pays money." He claimed that he had two children but in reality he has none. When he had his blood test taken and he asked about it he states that they told him that his blood was the nicest blood they had ever seen. He thought that he owned a house worth \$70,000. He further claimed that he was going to start a hospital in Syracuse where every physician would draw \$3,000 a year and only cases of tobacco addicts would be taken. He stated that the reason for his being in this hospital was due to his inhaling tobacco smoke but that, otherwise, he was in the very best of health.

In October, 1927, patient was inoculated with malaria. He required very close attention as he developed convulsive seizures during two of the paroxysms. He showed a long drawn out type of temperature during the initial rising period. At no time were his paroxysms clean cut and typical. There was, however, good febrile reaction. The malarial therapy was terminated on November 12. The convalescent period was about three weeks during which he gained markedly in weight. In December, 1927, he stated that, because of his gain in weight and his improved physical condition there was no reason for his remaining longer at the hospital. The grandiose ideas apparently disappeared. At present he is irritable, troublesome and assaultive. He is a constant smoker and will become very resentful if he is prevented from smoking on the ward. He believes that the physician and nurses are in league to restrain him from his rightful liberty. He accuses his wife of putting him out of the way so that she can enjoy herself without interference by him.

CASE 1. Already referred to in this paper also showed a paranoid reaction. He received the malarial therapy during July, 1926. He showed nothing unusual during it. Convalescence was rapid. The gain in weight was marked. About three months after the termination of the malaria he had a severe jaundice. He recovered from this. At this time he showed the first of his paranoid ideas. He complained that the malarial therapy had improved him and that we had given him jaundice to prevent his returning home. He now shows marked irritability and assaultiveness. He is interfering and meddlesome and when he has to be restrained because of his acts he will claim that this is all part of the conspiracy against him.

An explanation of this change in the psychosis might be found by analysis. According to Hollos and Ferenczi,²⁵ there is in the unconscious of every general paralytic the recognition of the ego insult by the disease process. This is not tolerated and compensatory mechanisms are resorted to in order to make the life situation tolerable. Depending upon the psycho-bio-genetic development the coloring will be either schizoid or syntoid. The euphoria and grandiose ideas are the means by which the individual compensates for his

unconsciously recognized failing efficiency. A further conflict is produced between the constant wish to be well and the realization of his progressive physical disability.

The malarial therapy with its dramatic changes from normal to high temperature impresses the patient deeply. He feels that from such drastic treatment much benefit must be derived. When this is followed by a marked degree of improvement both mental and physical, the wish to be well reanimates the psyche. If full insight has not been achieved with resulting defects of judgment, there will be a conflict between the underlying wish and reality. These cases will then protest and resent any intimation that they are not cured.

Psychiatrists are in a position to advise and guide in the use of this type of feбри-therapy. To obtain the most beneficial results they must secure the cooperation of the general practitioner. On his already over-burdened shoulders falls the task of preventing the personal tragedies and economic losses suffered by every community through general paralysis.

As stated before the objection is made that it is very difficult to persuade the patient and the relatives of future danger when abnormal behavior is not present and so does not indicate institutional care. In reply to this we would say that if the general hospitals both large and small, which serve any community, would equip themselves with special wards, there would be little difficulty in persuading the incipient general paralytic to avail himself of this form of treatment.

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PSYCHOSES AMONG CRIMINALS

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The Dannemora State Hospital is unique among the institutions for the insane in New York State in that it receives only male patients who are undergoing prison sentences for felonies. The question naturally arises as to whether the psychoses found among such a class differ in any way from those found among the insane in civil hospitals. Certainly one senses a difference in the reactions among the criminal insane from those in civil hospitals. This difference may be ascribed to any of a number of different causes,—personality, environment, prison conditions under which the psychosis developed, and is probably due to a combination of many different conditions. For instance, experience has shown that in caring for the insane criminal one must keep a continual watch for weapons; that every piece of metal which can be found is sharpened and worked into a cutting or stabbing weapon, and that fights among the criminal insane are more frequent than among the civil insane. When one has reviewed a number of histories of cases, the reason becomes evident. The ordinary citizen has learned from earliest youth to look to constituted authority for protection: If he is assaulted he looks for the nearest policeman; if he becomes involved in a serious altercation he engages a lawyer and takes his case to the courts. With the criminal his lifelong procedure has been just the opposite. His hand has always been against constituted authority and for protection and adjustment of his difficulties he has always looked to himself. These life-long habits of thought are so deeply rooted that they carry across into the psychosis even though it be of severe form. The patient in the civil hospital continues in the great majority of cases still to seek redress from constituted authority, in this case the personnel of the hospital; he complains for instance to the attendant or physician that those about him are making derogatory remarks. The criminal in like circumstances says nothing, but takes the matter into his own hands and makes a vicious assault upon his imagined tormentor. Other differences in reaction are readily noted but not so easily explained. It was for the purpose of discovering what, if any, of the peculiar-

ities of the psychosis pictured in this class could be ascribed to the immediate surroundings under which the psychosis developed that this review was made. While from this point of view the inquiry was not highly successful, it did bring to light a number of interesting findings, the more important of which will be briefly given.

For the purpose of the review a series of 250 consecutive admissions was studied. The series was arbitrarily begun at a certain consecutive number and carried through the next 250. The period represented is a few days over four years, from November, 1921 to November, 1925. One hundred and twenty-two of the cases still remain in the hospital. Of the 128 discharged, 99 were discharged recovered, 2 much improved, 2 improved, 4 unimproved, 2 as not insane and 19 have died. The rather high recovery rate is ascribed to the fact that, as will be shown later, a large proportion of the admissions result from episodic attacks, which frequently disappear with a change of environment.

A summary of the various features of status will present a picture of the average inmate of the hospital, and, at the same time, show some differences between the insane felon and the patient of the civil State hospital. The ages of admission varied between 19 and 75 years, with the average 32 years, 2 months and 15 days. Sixty-four per cent were single, 26 per cent married, 7 per cent widowed, 1 per cent divorced and 2 per cent separated. Thirty-three per cent were foreign-born and 51 per cent of the native-born were from foreign-born parents; 13 per cent were negroes. Twenty-eight per cent of the entire number claimed either no education at all or only the ability to read and write. The average grade attained by the whole number was between the fourth and fifth (4.35); however, if we omit the 71 who claimed no schooling, the average grade attained by the remainder lies between the sixth and seventh (6.17). Only 6 gave a school history which would point to precocity, and retardation in school was the general rule. Among those giving a school history, the average retardation was between one and two years (1.78). Twelve per cent were readmissions, either from other State hospitals or having formerly been patients here.

The psychoses represented were as follows:

	Per cent
Senile psychoses	1.6
General paralysis	3.2
Alcoholic psychoses .....	.4
Psychoses with somatic disease .....	.8
Manic-depressive psychoses	12.4
Dementia præcox	41.2
Paranoid conditions .....	.4
Epileptic psychoses .....	.4
Psychoses with psychopathic personality.....	34.4
Psychoses with mental deficiency	4.4
Not insane .....	.8
	<hr/> 100.0

One is immediately struck by the high percentage of cases diagnosed as psychosis with psychopathic personality. This class is always very high at this hospital. It represents individuals of unstable make-up who show a poor reaction to routine of any kind, and under prison conditions very easily fall into an episode of either depression or excitement which leads to their transfer to the hospital. Among this class are seen the true prison psychoses. It is often very surprising how quickly they respond to a change of environment, and it is not infrequent that they show an entirely normal reaction within a day or so after their admission. As time goes on, however, the hospital routine in turn irks them and they often become subject to further episodes. In this table, as is usual at this hospital, the percentages of general paralysis and manic-depressive cases are low.

As to the course of the various psychoses, perhaps the greatest variance from type is seen among the manic-depressive and dementia præcox types. Manic reactions are seen, but the typically disturbed manic is extremely rare. Rare also is the bizarre type of dementia præcox. Erratic delusional ideas among the præcokes, while seen, are not common. The more typical symptom is an extreme apathy with evasiveness. Partly this may be due to the natural suspiciousness of the criminal type. His confidence is very difficult to gain, and often delusional ideas are concealed. However, from somewhat extended study of criminals, both in the hospitals for the insane and in the prisons, the writer is of the opinion that

a large percentage of the population of our prisons could well be classified under the army diagnosis of "Inadequate personality", and that this personality has a general dulling effect upon the reactions, not only of the manic-depressive and dementia præcox psychoses, but to a greater or less extent upon all psychotic symptoms. Certainly among the criminal insane one sees few of the sharp cut typical psychoses, and certainly there is a tendency for all forms to assume a more or less similar type.

The crimes for which sentence was being served have been classified as follows:

	Per cent
Murder and manslaughter in varying degrees.....	17.6
Other crimes against persons (including assault, maiming and carrying weapons)	14.0
Crimes against property (including varying degrees of robbery, burglary, larceny, forgery and arson)	59.6
Sexual crimes (sodomy, incest, rape and bigamy)	6.4
Breaking jail	0.4
Prostitution of women	0.8
Abandonment of children	0.8
Kidnaping	0.4
	<hr/> 100.0

Such a classification is not entirely satisfactory. Carrying of weapons by the professional criminal is more often an aid to crime against property than against person, while robbery takes on the character of both. However, practically any other classification is open to as many criticisms. It is interesting to note that when the inmates of the prisons from which the patients came are classified in the same way the percentages agree reasonably closely with this table. That is to say, there does not appear to be any relation between the nature of the crime and a tendency to the development of a psychosis.

Among insane criminals recidivism is the rule. Sixty-two per cent of the cases studied gave a history of previous convictions, varying in number from 1 to 14, and the average number of previous convictions for the whole number studied was 1.86. While the per cent of recidivists varies in the different prisons, it is much higher among the criminal insane than in any of the prisons from which the patients are drawn. It is especially interesting to note

that among the 44 cases of murder and manslaughter in the series, the proportion of recidivism was less than half that found for the whole series.

The time elapsing between the date of sentence and that when the psychosis became manifest and the patient was admitted to the hospital varied from a few days to 14 years, the average time being 1.9 years. In the case of the 99 who have been discharged recovered, however, the time spent in prison before development of the psychosis was 2.34 years.

When we examine the mental symptoms which attracted attention to the psychoses, we are immediately impressed by the prevalence of ideas of a paranoid nature. A study of the physicians' statements in the order of transfer from the prisons allows the following classification:

	Per cent
No delusional ideas evident	28.4
Paranoid ideas predominant	43.2
Various somatic and hypochondriacal ideas.....	6.8
Grandiose trends	6.8
Ideas relative to freedom.....	2.0
Various other trends	12.8
	<hr/> 100.0

Among the paranoid ideas expressed, two groups comprise over half the whole number. Forty-six cases were in fear of receiving bodily injury or of being murdered and 27 imagined that they were being poisoned. A peculiar fact about these paranoid ideas is that they do not appear to have any relation to the nature of the psychoses, as a classification of the cases showing paranoid ideas according to psychoses shows practically the same percentages as does the entire series. Paranoid ideas are usually looked upon as being presages of poor prognosis. However, in this series 42.5 per cent of the cases showing paranoid ideas have been discharged as recovered as compared with 36.4 per cent of the whole series. These delusions were in a few cases directed against the officers of the prison, in a still smaller number against friends or relatives outside, but in the great majority of cases against fellow inmates. They were frequently accompanied by auditory hallucinations and almost always by a marked fear reaction. In response to this fear reaction, the inmate would ask to be kept in his cell where others

could not get to him, or with ideas of poisoning would refuse to eat. As a usual thing no reason is given for the fear. When one is given, it usually is that the victim was such a good worker or was so well liked by the officials that all the others were jealous of him.

Bleuler recognized the tendency to paranoid reactions among prisoners and accounts for it as follows: "One of the most frequent syndromes in long detention is the *imprisonment complex*, which originates in quite the same manner in various dispositions, either gradually or with a sudden inspiration, with or without hallucinations, the patients imagine themselves innocent, liberated or pardoned. But as they are not liberated in reality, they develop delusions of persecution about the environment, the public prosecutor and the courts. * * * The participation of the two components, liberation and persecution, may appear in very different ways. In one case one delusion dominates, in another the other." As applied to the series studied, this explanation does not appear fully adequate. In the first place in our series the cases presenting paranoid ideas distinctly did not represent long imprisonments. The average time of imprisonment before commitment has been shown to be 1.9 years, while the average time of those presenting paranoid symptoms was 1.47 years. Again with the mechanism described by Bleuler one would expect to find a more even division between the two components, liberation and persecution. This series shows 108 cases with ideas of persecution and only five with ideas relative to liberation and one of them was a very good illustration of Ruedin's "pre-senile delusion of being pardoned" and therefore could not be involved in this mechanism. Thirdly, according to this explanation one would expect to find the ideas of persecution directed against the prison authorities who were preventing freedom rather than, as occurred in the great majority of cases, against fellow inmates, and finally the thesis does not explain the frequency of ideas of poisoning. In the opinion of the writer the mechanism is more deep seated,—it is not a reaction so much to environment as of personality. It is the opinion commonly held not only by prison officials, but also by many prisoners themselves that only the less clever among criminals fall into the hands of the police and finally reach prison. Certainly, the so-called "high-type criminal" is extremely rare among the prison population. One such recently told the

writer that during a long criminal career the only times he had ever been arrested were those when he had been intoxicated and so not in condition to exercise his usual skill and caution. In other words, as has already been suggested, the prison population represents an inadequate class. We have all of us recognized in working with the mentally deficient their ready ability to form paranoid ideas,—the reaction so frequently seen in the backward child who blames his backwardness upon the teacher who “has a bug on him.” Without question it is a defense reaction to an inferiority complex. To admit one’s failures are due to one’s self is to admit one’s incompetence, and if these failures are too frequent such an admission becomes incompatible with one’s self-respect. Thus is formed the habit of the inadequate mind of projecting the causes of his failures to those about him. The convict, as has been suggested, represents the chronic failure of the criminal profession. The inadequacy which has led to his arrest and conviction follows him into his prison life so that he cannot make even a successful prison inmate. The habit of mind which has through life protected him from a realization of his own inability stands by him in his psychosis in the development of paranoid ideas with their supporting hallucinations and fear reactions. This mechanism explains why the delusions are so commonly directed against fellow inmates with whom he is in the closest contact and to whom he has to make the closest adjustments. It would also explain the frequency of the ideas of poisoning as being reactions of the paranoid disposed mind to various bodily ailments, especially those of the digestive system arising from a nutritious diet with lack of activity to which this class of inmates is prone. The defense to this inferiority complex manifests itself in the explanation that their persecutions arise from the fact that they are so industrious or so well liked by the officers that all the others are jealous of them,—a statement not verified by the prison reports.

To summarize, the average insane criminal as admitted to this hospital, is a man past early youth who has a well marked criminal history,—often with a record of trunacy and juvenile delinquency. (Those having committed murder, however, are usually an exception to this rule.) Various types of psychopathic personality are common. Those cases remaining longest in prison before develop-

ing a psychosis show, on the whole, the better prognosis for recovery. There does not appear to be any connection between the nature of the crime committed and a tendency to develop a psychosis. There is a very marked tendency to the formation of ideas of a persecutory nature, accompanied by hallucinations and a fear reaction. These ideas are quite independent of the nature of the psychosis which is developing; they have no bad effect upon the prognosis of the case and upon analysis appear to be a logical outgrowth of an inadequate personality. This personality which is typical of the convict is also seen in its general dulling of the reactions of whatever psychosis may develop.

PSYCHOSES DUE TO THYROID TOXEMIA WITH IODINE DEFICIENCY

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The purpose of this paper is to call attention to a group of mental disorders having as their etiology a disturbance of the thyroid gland. Such cases, because of their symptoms, are frequently confused with the other organic psychoses.

Many of these patients give a history of an acute infection followed by a gradual loss in weight and strength, a tendency to easy fatigue and the insidious development of mental symptoms. The outstanding physical manifestations which these individuals show are emaciation, apparent widening of the palpebral fissure with or without exophthalmos, tremor of the facial muscles, tongue and fingers, and a rapid pulse rate, ranging from 100 to 140. In the majority of cases there is an elevation of temperature varying from 99° to 101°. The thyroid gland may show a slight general hypertrophy or only one lobe may be increased in size, while in many cases there is no apparent thyroid enlargement. As a rule, the reflexes are increased. In the more advanced cases the pupils react sluggishly to light, the gait is unsteady, and there may be a positive Romberg. Tests for basal metabolism are frequently unsatisfactory because of the patients' inability to cooperate, but when they can be made the rate is found to be materially increased. The blood and spinal fluid findings are negative. The mental picture varies with the personality make-up and the life experiences of the patient. There is invariably a lowering of mental tension, difficulty in complicated thinking, apprehension and concentration together with increased fatigability. Some patients express delusional ideas which may assume a grandiose nature, and hallucinations may occur. In the more pronounced cases the memory is quite defective, retention poor, and orientation seriously interfered with. At times the picture may be one of delirium associated with considerable restlessness. Because of the physical and mental symptoms which these patients manifest these cases are sometimes tentatively diagnosed as general paralysis. However, when the serological findings are found to be negative, tuberculosis or malignancy are frequently

looked upon as the etiological factors. When the iodides are administered in the form of Lugol's solution the mental symptoms gradually subside, the physical condition improves and the patients invariably recover. The following cases are typical of this group:

Case I: A man 47 years of age. Family history essentially negative. Married at 23, no children, manager of shoe store in New York City. His health was good until one year before admission to a State hospital, when he began to lose in weight and strength and complained of easy fatigue. About six months later a slight enlargement of the thyroid gland was noticed, coincident with a gradual physical decline; he became irritable and suffered from insomnia. About three weeks prior to admission he began to be boastful, argumentative, expressed many expansive delusional ideas, and showed a marked judgment defect. On admission he weighed 95 pounds. Physical examination showed slight exophthalmos, slight enlargement of the thyroid gland, particularly of the right lobe, marked tremor of the facial muscles, tongue and fingers, his gait was unsteady and there was a definite swaying in the Romberg position, pupils reacted sluggishly to light, pulse ranged from 128 to 140. During the first week of his hospital residence he had an elevation of temperature, varying from 99° to 100.4° . Blood and spinal fluid findings were negative. Mentally he was mildly confused and euphoric. He expressed the delusion that he was worth several millions of dollars, and that he was about to organize a chain of retail stores which would net him many additional millions. As a result of his delusional ideas he insisted on writing many letters to business houses, and when an attempt was made to discourage him he became boastful, excited and irritable. He was oriented for place, partially oriented for time, memory defective, especially for dates and details. Nine days following admission Lugol's solution was administered in 10 min. doses after each meal. Ten days after the beginning of this treatment the patient was quiet and showed no confusion. However, he was still euphoric, somewhat boastful, and retained some of his delusions of wealth. He had gained 4 pounds in weight, and his pulse ranged from 90 to 100. After thirty days' treatment he was mentally clear, and showed insight regarding his condition. He continued to improve and was paroled from the hospital two months and four days following his admission. At the

time of his parole he showed no psychotic symptoms. The thyroid enlargement had practically disappeared, and there were no neurological manifestations. His weight was 135 pounds, pulse 78 to 84. He continued to take Lugol's solution in 5 min. doses for one month following his parole, at the end of which time it was discontinued and he used iodine salt at the table. He returned to his former place of employment two months after leaving the hospital and has remained well for more than three years.

Case II: A man 52 years of age, one brother committed suicide. Family history otherwise negative. Married, traveling freight agent. His general health was good until three years before admission to the hospital, at which time he weighed 212 pounds. He developed a severe infection of his tonsils following which he began to lose in weight. Notwithstanding the fact that he continually received medical treatment, he showed a gradual physical decline. About five months prior to his admission to the hospital he began to be depressed and emotional. Two weeks previous to admission he awoke one morning in a dazed condition, was disoriented, expressed the belief that strange people were in his room, and complained of a peculiar bodily sensation which he described as vertigo, and a feeling as though he was going down in an elevator. He was at once taken to a general hospital where he became so noisy that it was necessary to commit him to a State hospital. Physical examination showed him to be an emaciated man, weight several days after admission 93 pounds, deep reflexes increased, pupils reacted sluggishly to light, heart somewhat enlarged downward and to the left, soft blowing pre-systolic murmur at the apex. Blood pressure 136-98, thyroid not enlarged. Temperature ranged from 99.6° to 100.6°. Blood examination showed hemoglobin 70 per cent, erythrocytes 3,010,000, leucocytes 5,700. Blood and spinal fluid Wassermann negative, slight trace of albumin in urine. Patient cooperated poorly in basal metabolism tests, but a test made two months following his admission indicated plus 133. At the time of his admission he showed much confusion and talked in an incoherent and irrelevant manner. The content of his thought was apparently a jumble of ideas relative to his former occupation. He appeared to have no appreciation of his condition and on one occasion said "Call Utica and tell them that you are holding L— and ask if you

shall release L— and let him travel on freight.” He was disoriented for place and time. Data of personal identification and remote memory very defective. This patient was confined to his bed and received general tonic treatment together with moderate doses of tincture of digitalis. At the end of the first month’s hospital residence he showed improvement both mentally and physically. However, he was talkative, restless, and at times mildly elated. At times he showed some mental clouding. He had an evening elevation of temperature and a rapid pulse rate. Mental diagnosis two months after admission was psychosis with other somatic diseases, endocarditis. At the end of six months residence in the hospital he weighed 121 pounds. Pulse rate varied from 120 to 140. Because of his general weakness and tendency to easy fatigue he spent his time in bed or in a wheel chair. Mentally he was restless and emotionally unstable. He frequently talked about his condition and while doing so his eyes filled with tears. His orientation and memory were fair. He complained of great fatigue after slight exertion and at times when this was much in evidence he showed mild confusion. At this time Lugol’s solution was administered in 10 min. doses after each meal. During the first two weeks of this treatment he gained $7\frac{1}{2}$ pounds, his pulse rate dropped to from 90 to 100. At the end of six weeks’ treatment he weighed 146 pounds, which was a gain of 25 pounds. His pulse ranged from 80 to 90. He was dressed and walked about the wards and grounds each day, had a good appetite, and no longer complained of fatigue. He showed no psychotic symptoms and had a good appreciation of his former condition. At the time of his parole, September 19, 1926, he was instructed to continue Lugol’s solution in 5 min. doses three times a day for one month, following which he was advised to use iodine salt with his food. Information received from him since leaving the hospital indicates that he is in good health and working daily.

Case III: A man 38 years of age, father alcoholic, family history otherwise negative. Married, father of two sons, leather dealer. His general health had been good until February, 1924, when he suffered an attack of tonsillitis, following which he had a tonsillectomy. He recovered slowly from this operation, but did not appear to regain his previous health. In May, 1925, he began to complain of a feeling of suffocation and seemed to be much con-

cerned about his condition. He lost interest in his business and consulted many physicians without receiving any apparent benefit. In January, 1926, he gave up his business and spent his time about the home. He was restless, irritable, and slept poorly at night. For three weeks prior to his admission on December 8, 1926, he was confined to his bed, took very little food and was confused, restless, irritable and resistive. On several occasions he threatened to injure his wife and talked of suicide. On admissions he was very emaciated and had a large bed sore over the sacrum, height 5 feet, 7 inches, weight 12 days after admission, 90 pounds. There was apparent widening of palpebral fissure, no exophthalmos, marked tremor of the facial muscles, tongue and extended fingers. Pupils reacted sluggishly to light, thyroid not enlarged. Pulse ranged from 100 to 114, blood pressure 126-90. Deep reflexes exaggerated, serology negative. Urine showed slight trace of albumin. Basal metabolism test three months after admission showed plus 84. Mentally he was restless, confused and emotionally unstable. On rare occasions he appeared to be troubled by auditory hallucinations as was evidenced by the fact that he spoke of hearing his wife call to him. He frequently expressed many transitory delusional ideas, in that at times he fancied that people were in his room annoying him, that the medicine which he was taking made him weak, and that his wife had tried to poison him. There was much difficulty in thinking. He was completely disoriented, and appeared to have no appreciation of his condition. Owing to his marked incoordination much of the time during the first two weeks of his hospital residence he was unable to feed himself. Patient was presented at staff meeting one month and ten days following admission, at which time he appeared to have considerable difficulty in thinking, became easily fatigued, and exhibited a definite memory defect. At this time he was unable to walk because of general weakness and muscular incoordination. He had marked difficulty in pronouncing test phrases. This case provoked considerable discussion among members of the staff and as a result the diagnosis was deferred. Five weeks following his admission treatment with Lugol's solution was begun with 10 min. doses, after each meal. His weight at that time was 90 pounds. Following this treatment the patient showed a gradual gain in weight and strength. His

physical condition improved and at the same time his mental symptoms gradually disappeared. Eight weeks after beginning treatment he was able to walk about the grounds and two weeks later he was paroled from the hospital. At the time of his parole he weighed 143 pounds, and appeared to be in excellent mental and physical health. He was advised to discontinue taking Lugol's solution and to use iodine salt with his food. Since his parole he has continued in good health and has resumed his former occupation.

Notwithstanding the fact that male cases alone are reported in this paper these symptoms occur with equal frequency in the female. While in some respects these cases may be said to resemble Graves's disease, the general picture is quite different in that the emotional variations do not assume the same intensity as in exophthalmic goiter. Hallucinations are not a frequent symptom and when they do occur they are likely to be of the auditory type and not at all prominent. Many of these patients show great difficulty in thinking and memory defects are more pronounced than in Graves's disease. On the physical side many of these patients show no thyroid enlargement and no exophthalmos. There are no Von Graefe's or Moebius signs and the tremor is much coarser and more irregular than in cases of exophthalmic goiter. These cases differ materially from those associated with adenomatous and cystic disease of the thyroid insofar as the physical manifestations are concerned. The patients do not suffer from a feeling of fullness in the head, headache, vertigo, tinnitus and the sensory disturbances frequently found in cases of adenomatous and cystic goiter. Inasmuch as the thyroid is enlarged only slightly, if at all, there are no pressure symptoms. In their psychotic reactions these patients do not show the marked excitement, irritability and prominent hallucinations common to psychoses with cystic and adenomatous goiter. The mental picture in these cases differs materially from that seen in hypothyroidism, in that they do not show the mental apathy, drowsiness, retardation and melancholoid picture common to the myxoedematous state. The marked loss in body weight, increased heart action, absence of skin changes and increased metabolism stand out in contradiction to the physical manifestations of hypothyroidism.

The foregoing cases are typical illustration of that group of mental disorders, which seem to be due to a toxic thyroid

with an iodine deficiency. Unlike the cystic and adenomatous thyroid conditions and many of the exophthalmos type they respond very favorably to the administration of iodine in the form of Lugol's solution. Whenever we meet with a case which appears to be that of advanced general paralysis but has no history of active antileptic treatment over a prolonged period of time and a negative serology, we should always suspect a toxic thyroid. Likewise we should have this condition in mind before making a diagnosis of psychosis due to malignancy or advanced pulmonary tuberculosis. Many of these patients have a chronic bronchitis which is frequently mistaken for pulmonary tuberculosis. Careful physical examinations supplemented by x-ray pictures and laboratory tests will clarify the diagnosis.

A STUDY OF A MANIC-DEPRESSIVE FAMILY

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In the past a great deal of effort has been spent trying to prove the direct inheritance of mental disease. It is now generally conceded that direct inheritance does not obtain. But heredity must play some part from the very fact of the frequency of similar mental diseases in certain families. In a recent analysis of 552 cases from the U. S. Veterans' Hospital, No. 62, Whitmore shows the incidence of proven heredity to be 33.38 per cent for dementia præcox and 37.9 per cent for the manic-depressive psychoses. Others have quoted higher figures but all seem to agree that a higher incidence is found in manic-depressive than in dementia præcox cases.

The relation of the schizoid personality make-up to dementia præcox and of the cyclothymic make-up to the manic-depressive psychoses is too well known to require discussion. Kretschmer has shown us, with renewed interest, the relationship of constitution and personality make-up. Here, then, are inheritable characteristics which can be traced with a fair degree of accuracy.

Hoffman, in a careful analysis of several hundred pedigrees collected by E. Rüdin, finds that persons who develop dementia præcox have usually shown a schizoid temperament earlier in life and that the parents have also shown the same make-up. He concludes that the behavior of dementia præcox patients depends on primitive action patterns which are present in every one and which recall the behavior of the child and the savage. They are given expression only in those who have inherited a certain temperament. This temperament also tend to go with the asthenic constitution—the tall, slender type.

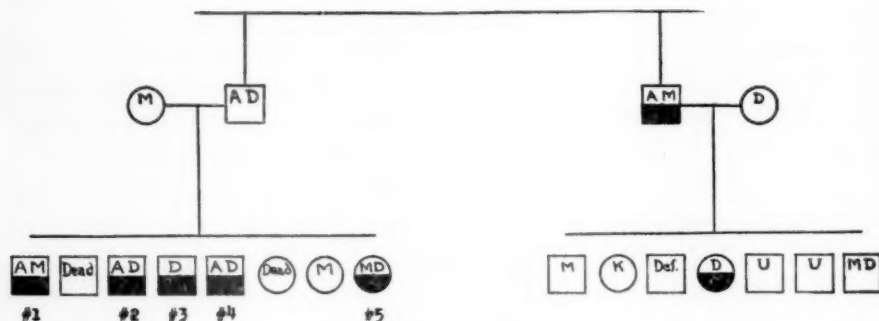
In exactly the same manner it can be shown that people who develop the manic-depressive psychoses have usually shown the cyclothymic temperament earlier in life and either one or both of the parents have shown the same personality make-up. This type tends to go with the pyknic constitution.

Bearing out this assumption the family herewith presented shows the same type of psychosis in five of six living children who have totalled nine admissions to the Gowanda State Homeopathic Hos-

pital; all manic-depressive group, six depressive type and three manic. This family has been selected because of experience with three members on their last admissions and personal study of the other two.

To give an adequate background to this present generation we must go back as far as possible. Unfortunately the parents were immigrants so that it is impossible to study the preceding generation. But we have two brothers and three cousins whose similar make-up argue for a fair degree of uniformity in the family strain.

The one brother, J. B., father of our family, was born in Alsace-Lorraine, son of a porcelain manufacturer said to be quite wealthy. The story is told that J. B. and his brother left home because they refused to marry girls of their father's choice. At all events, it is a fact that the two brothers and three cousins came to this country at an early age and settled in Western New York. J. B. was a lazy, improvident, shiftless, and inefficient person who became a shoemaker. He was moody, easily depressed and took to drinking heavily. He died at 38 years of age from cerebral haemorrhage.



HEREDITY CHART OF THE TWO BROTHERS AND THEIR FAMILIES

LEGEND: M MANIC MAKE-UP
 D DEPRESSIVE MAKE-UP
 A ALCOHOLIC
 K KLEPTOMANIAC
 D MENTALLY DEFICIENT
 U UNKNOWN
 INSANE ARE IN SOLID BLACK

His brother, B. B., was always considered queer. He was very nervous and excitable. Often, in public meetings, he has been known to get so excited that he would interrupt the speaker. He, also, was alcoholic and recognized as insane. He married his first cousin, R. B., who had been a beggar when in France. They had seven children, one of whom was "irrational, strange and excitable," one a kleptomaniac, another mentally deficient, a fourth died of "melancholy," two unknown and the seventh was described as a fine young man but "excitable and nervous" who died in the army.

The other cousin, K. B. S., an uncouth, vulgar woman, married a local ne'er do well and located on the edge of the Indian Reservation where she maintained a "cider" house and was sexually promiscuous. She was known to sit for hours staring in a dejected fashion and would curse violently when aroused. She died in 1905 of kidney trouble. One son, J. S., contracted syphilis at an early age from the Indian squaws. He was always unstable and an alcoholic with frequent attacks of pathological intoxication at which times he would be violent. He died in one of these attacks.

The first brother married L. B., an ignorant, coarse and emotional woman who was a chronic hypomaniac in make-up. She has always been fairly paranoid against her family because she thought they had cheated her in the division of their parents' small farm. She was given the old house and six and a quarter acres where she lives to this day, 73 years of age, with three of her sons. The husband died when the twins, youngest of eight children, were only nine months of age so that she has been the only parent they knew, but she paid little attention to her house and less to the children. They did much as they pleased, with little restraint except that the mother was a devout Roman Catholic and insisted on their going regularly to church.

Number 1. J. F. B., identification number 180848. Born in New York State, July 14, 1881.

Nothing unusual in infancy or early childhood with the exception of an attack of "brain fever" at three years. He was always a wild youngster, showed little propensity for schooling and frequently played truant to catch frogs which he sold for money to buy tobacco. He left school at 14 when his father died and worked as messenger boy and general laborer until 21 years of age.

His psychosexual development was abnormal in that he did not care for the opposite sex although he thought he should. He masturbated excessively from an early age. At 21 years of age he hastily married a girl of 16 but never lived with her. Because of the bride's extreme youth the marriage was speedily annulled.

Following this he lived with a recognized prostitute, began to drink whiskey heavily and used cocaine. His mother explained that this woman gave him this stuff so that she could take his money away. He was earning fairly good wages as a machinist's helper. Between the pressure of his mother and his paramour he broke, became restless, overactive and displayed a grandiose trend. He was arrested for hiring liveries and claiming to own them. Breaking jail he was rearrested and committed to the Gowanda State Homeopathic Hospital April 30, 1910, at the age of 28.

On admission he was overactive, elated and euphoric with a rather grandiose trend: "My mother thinks I have been rowdying around; maybe it looks so. I might have been president but I'd rather walk along without guardians—I could wear diamonds; maybe I will—I will go to Germany; I have business there; my grandfather had millions. I want to see where that is rusting. I know lots of people who need it."

Physically there was nothing of importance with the exception of moderately exaggerated deep reflexes. Laboratory analyses negative.

The case ran a protracted course and it was not until April 30, 1910, that he was discharged with good insight as recovered from manic-depressive psychosis, manic type.

Following his discharge he worked steadily and remained in good mental health until he married in 1913. His wife, a widow several years his senior, is a woman of little intelligence, slovenly and garrulous; a poor housekeeper and a worse mother. Her father and sister were insane. There has been constant verbal arguments and a steady let down in the patient's capacity for work over the ensuing years with a more chronic addiction to alcohol. Conditions have been aggravated by the arrival of the four children. Sexual relations have been very limited and the patient has continued masturbation.

When the patient had refused to work for several months the wife

nagged incessantly until he became very vile and abusive, threw dishes, threatened to smash the house with a sledge, kill his family and die in the electric chair.. The police were frequently called to settle disputes.

When recommitted to the Gowanda State Homeopathic Hospital he was decidedly hypomanic, irritable and easily excitable. Trends were directed largely against his wife, her sister and alcoholic husband. There was a noticeable reduction since the first admission 18 years ago.

Physically he was in excellent condition with the exception of large haemorrhoids, both external and internal, with a slight secondary anaemia due to constant oozing. Urinalysis negative, blood Wassermann negative, Schick negative.

The haemorrhoids were operated with great subjective relief and some physical improvement. The patient quickly quieted down, worked only fairly in the dining room, and finally gained some insight although not as full as on first admission. Paroled July 7, 1927, as greatly improved from manic-depressive psychosis, manic type.

It has since been necessary to separate the patient from his wife because they can not agree. The patient much prefers to live with his aged mother; the wife, reputed to be of questionable character, seems satisfied. It has been recommended that the children be removed from her care.

It is interesting to observe the children of this couple. The oldest, a girl, although only 14, has already been compromised; the second, a girl of 13, is very nervous and unstable; the third, a girl of 9 years, appears quite dull and the fourth, a boy of 7, is difficult to manage. They are apparently all problem children.

Number 2, F. S. B., identification number 41855. Born in New York State, November 1, 1885.

Always weak and puny as a child. Seemed strongly attached to the mother. Father died when patient was only seven years of age. Because of the attachment for his mother the patient could never go away from home. He worried easily and the least thing plunged him into the depths of despair.

Psychosexually, little can be learned from the patient because of his reticence but it is known that he never cared for girls and was

seldom seen in their company. The older brother states that he is sure he masturbated a great deal and worried about it. He has been known to go to sporting houses. Never married.

Attended school from 7 to 14 reaching the seventh grade. Progress was apparently normal but there was no special ability as the patient applied himself closely.

Because the older brother could not be depended upon the patient felt responsible, as next in line, for the support of the family and this worried him. He worked industriously as a boiler maker and drew fairly good pay but the severity of the work and the pressure of his responsibility were too much and he turned to alcohol for encouragement. Drank regularly but not often intoxicated. The case of his brother, J. B. B., who was committed to this hospital at this time seemed to worry him still more. He drank large quantities of whiskey, smoked excessively, became melancholy and developed somatic ideas.

Because of his depression he was committed to the Gowanda State Homeopathic Hospital August 11, 1914. Here he seemed depressed and retarded, complained of a host of somatic symptoms such as vertigo, weakness, nervousness, stomach ache, bowel trouble, poor memory, etc. All the time he displayed good insight realizing that his condition was due to worry alone and this, in turn, he blamed on his dissipation and felt quite hopeless.

Physically there was no organic pathology. Very poor elimination. Urinalysis negative.

Under continued treatment the somatic symptoms became less impelling and the patient gradually became less self-centered and morose, entering into ward life and was paroled to his mother's care, February 15, 1915. Discharged as recovered from manic-depressive psychosis, depressed type, August 14, 1915.

For a time the patient got along well, seemed much stronger than before, complained less, and seemed to be more like his old self; drank a great deal, smoked cigarettes incessantly and gambled whenever he had a chance. In 1916 the commitment of his sister, A. B. G., to this hospital made a deep impression on him. He seemed to worry more than ever, began complaining of somatic symptoms, became almost inaccessible and totally withdrawn even from his family. Was recommitted to the Gowanda State Homeopathic Hospital, August 25, 1917.

On admission there was marked psychomotor retardation; he was uninterested in anything; despondent and hopeless. His worries were based mainly on his physical condition although financial worry was also a factor. There was no disturbance of the stream of thought and the sensorium remained clear. He again showed surprisingly good insight.

Physically there was no organic pathology, the superficial reflexes were normal but the deep reflexes were slightly exaggerated. Urinalysis showed an occasional hyaline cast.

Recovery from this attack was more protracted. Every slight symptom was elaborated; if the bowels did not move one day he developed sore throat and pain in the occiput. After a great deal of treatment he finally improved and was paroled home October 12, 1918, and discharged as recovered from manic-depressive psychosis, depressed type, June 19, 1919.

After leaving the hospital he drank very little although he still smoked cigarettes excessively and gambled. He stayed closely at home helping his brother on the small farm, was very quiet and inclined to be rather depressive but got along well until February, 1926. Following a severe cold he complained of weakness, inability to work, felt sad and depressed, gradually lost his appetite and, at the suggestion of his brother, returned to the Gowanda State Homeopathic Hospital as a voluntary patient, April 23, 1926.

At this third admission he seemed quite retarded but not deeply depressed, his reaction more apathetic and dull. The psychomotor retardation was the main feature; he answered questions haltingly, moved slowly, but showed little emotion. While he realized his condition he explained it on a physical basis following a bad "cold" saying that he had been unable to work and felt hopeless of the future.

Physically he appeared much older than his 36 years. There was a slight peripheral sclerosis and the cardiac sounds were not clear. The superficial reflexes were greatly diminished but the deep reflexes increased. Blood pressure was only 102-68; urinalysis negative; Wassermann negative in serum; Schick test negative.

Again each slight physical symptom gave rise to worry and prostration. Typhoid inoculation prostrated him without any objective findings; slight costiveness caused most peculiar pains; a restless

patient kept him awake nights, etc. Under treatment he proved cooperative and gradually gained interest in occupational therapy and was later working in the dining room. At his own request he was paroled to his brother's care, May 1, 1927.

He is not doing well at home; drinks a great deal, will not work except to help his aged mother in the house, stays up late nights and remains in bed until noon. If crossed he flies into a tantrum.

Number 3. J. B. B., identification number 78608. Born in New York State, January 25, 1891.

Infancy and childhood uneventful. No illnesses except measles at six years. He was always a most serious child, quiet and reserved and with more ambition than any other member of the family. Attended school from 6 to 16 completing the second year of high school. Seemed bright and wanted to study for the priesthood but financial conditions would not permit. He worried greatly over this frustration of his desire and was somewhat despondent.

Psychosexual development. Admits excessive masturbation from an early age. Not attracted to the opposite sex. The father died when the patient was four years old so that he remembers nothing of him, but, like his brothers, was quite attached to the mother.

Began work at 17 years of age as a machinist and was industrious and steady. Married at 23, to a very pretty, bright and capable young girl. Was never able to perform the sexual act and brooded over this, became depressed, was unable to work, claiming to be too tired.

Committed to the Gowanda State Homeopathic Hospital September 19, 1914. On admission he showed some psychomotor retardation. Stream of thought was greatly restricted and unproductive. Appeared depressed but not deeply. Showed good insight into his condition.

Physical condition good. Described as tall and stout. Beard and mustache very sparse. Secondary sexual hair distribution female in type.

Rapidly improved and was discharged as recovered from manic-depressive psychosis, depressed type, November 30, 1914.

In April, 1915, while returning from a visit to the home of his wife's parents in Denver, the patient got off the train near home leaving his wife. He wandered to a town near his home and found

work there. Several days later a fellow workman showed him an item in the paper telling of his mysterious disappearance. He immediately telephoned his wife and told her where he was. Claimed to have no knowledge of his actions. At last report he was working and in apparently good mental health.

Number 4, E. R. B., identification number 112441. Born in New York State, June 30, 1896.

Nothing eventful can be learned of early childhood. Had measles and mumps early. Attended school from the age of 7 to 14 reaching the ninth grade. Was considered of average ability. Very reserved in manner, quiet, polite and described as a dreamer.. He had periods of withdrawing from the family, secluding himself in his room and remaining for hours at a time. Always considered "queer" by family and neighbors. He prays for hours at a time.

Psychosexual development: Little can be learned since he is so extremely reticent, and brothers know nothing of his inner life. Denies masturbation. Has always avoided the opposite sex. Father died when patient was only two years old. Shows even stronger attachment for mother than do his brothers.

After leaving school the patient worked for two years in a store. Then he stay at home with his mother and farmed but was too idealistic and impracticable to be a successful farmer. At the age of 16 was said to have had a typical depression which lasted for one year. Following this he began to drink and, prior to admission, had drunk from one-half to a full pint of whiskey daily. Became afraid to stay at home lest he would lose his mind so entered the Gowanda State Homeopathic Hospital as a voluntary patient, February 13, 1919.

On admission he was quite depressed, retarded and confused. Explained that he had never recovered from an attack of "flu" seven weeks before and had been so weak and nervous he could not work. At times he shook all over and his left hand and foot got cold. He had nocturnal emissions two or three times a week. Expressed a great deal of worry concerning religion and his relations with the Roman Catholic Church.

Physically he appeared to be a well-developed and well-nourished young man with no signs of organic pathology. Both superficial and deep reflexes increased. Cyanosis and sweating of extremities. Laboratory reports negative.

He was inclined to be careless of his personal appearance on the ward, unclean in habits, chewed tobacco in bed, soiling the clothes, and became sulky and insolent when reproved. Wanted to read farm magazines and detective stories. Refused medicine and would not help with ward work. Claimed that he was homesick. Soon began to brighten up, took interest in ward life, helped with the work and seemed pleasant. Was able to give a good retrospective account of his trouble. Discharged as recovered from manic-depressive psychosis, depressed type, May 9, 1919.

Since his discharge he has remained fairly well adjusted but is very unstable and emotional and drinks heavily.

Number 5, A. B. G., identification number 84723. Born in New York State, March 26, 1896.

One of the twins but totally unlike the twin sister in make-up. Always very quiet and kept much to herself; extremely moody and stubborn and could not get along well with other members of the family. Attended school from 6 to 16 reaching the eighth grade. The mother and older brother wanted to keep her in school but she wanted to earn her own living.

Worked for a time in a shoe factory and then in a silk mill. Never made friends and was liked by few people. Had only one beau by whom she became pregnant. Married him May 7, 1914, but continuously brooded over the fact that she became pregnant before marriage and felt that she could never be forgiven. Following the birth of the child she became careless about the house and herself and would finally do nothing. Was depressed and spoke of suicide. Committed to the Gowanda State Homeopathic Hospital, July 5, 1915.

Here she was depressed and tearful but not retarded. Declared that she had sinned and should have never married and left her mother. Expressed delusions of infidelity against her husband and seemed very jealous of him. Was detected masturbating at night.

Physically she appeared to be in perfect health. No neurological symptoms. Urinalysis showed a positive albumin and an occasional hyaline cast and cylindroids.

She slept little at first, was depressed and cried a great deal. Threatened suicide and had to be watched carefully. Wrote self-accusatory letters to her husband and appeared deeply religious.

Under treatment she became less depressed but became so homesick that she was finally paroled to her husband's care for one month against the advice of the hospital.

When returned at the end of the month by her mother, she was even more depressed than upon admission, openly suicidal, worried because it was wicked to take one's life; felt depressed and hopeless. After prolonged treatment she recovered, showed good insight and was paroled to the care of her husband, June 9, 1916, as recovered from manic-depressive psychosis, depression.

Following parole she lived with her husband and two children at the home of her mother-in-law and seemed to get along well. Was discharged December 6, 1916.

In 1918 she left her husband and children for some time while she went to another town and worked in a factory declaring that she was too weak to do house work. After her return she was nervous and easily upset, was extremely jealous of her husband and they quarreled frequently. In February, 1925, they bought a home next door to the patient's mother. As their financial condition was precarious she worried for fear they could not pay for it. Then, too, her mother had always been antagonistic to the husband and her influence over the patient was disturbing. She became very restless, slept poorly and had vivid dreams of members of her family dying. Would run to the neighbors in the middle of the night to announce the death of her mother, spent hours in church praying and singing, danced and sang, tore her clothing, stood in the road and waved a crucifix at passing automobiles and often knelt in the road and prayed. Was again committed to the Gowanda State Homeopathic Hospital, May 15, 1926.

On admission was laughing and singing, showed marked psychomotor activity, preached and cursed, was extremely immodest, wet and soiled her bed, floor and walls. When in the continuous bath would try to get her head under water and declared that she would drown herself.

After three months she became somewhat depressed and had to be closely watched because of suicidal tendencies. Was pregnant and gave birth to a healthy male child January 25, 1927, in the midst of a manic attack. Could not be trusted to nurse the child and it was put on a formula and later sent to a Catholic nursery. Octo-

ber 18, 1927, the patient was quieter so the opportunity was taken to make cervical and perineal repairs and to do a sterilization and ventral fixation. At the present time she is still hypomanic.

CONCLUSIONS

1. There is a startling similarity in psychotic reaction within family groups admitted to State hospitals.
2. Direct inheritance is not proven in the psychoses.
3. Personality make-up, temperament and behavior traits are partly a matter of inheritance.
4. These determine the reaction type in the psychoses.
5. A manic-depressive family with easily recognized make-up and similar environmental situations offered.

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SOME ASPECTS OF METABOLISM IN ACROMEGALY*

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The following is a summary of some observations made upon 100 consecutive patients with acromegaly admitted to the Peter Bent Brigham Hospital on the service of Dr. Harvey Cushing in a period of 13 years ending August 1, 1926. About 40 of these I had the privilege of studying personally with Dr. Cushing during the last three years of this period. The data concerning the others were drawn from the hospital records.

In spite of Marie's classical description and the numerous case reports in the literature, it seemed, nevertheless, of value to us to analyze the progress of this very protean disease from the uniformly excellent records made under the direct supervision of Dr. Cushing of so large a number of patients.

Among other interesting data obtained from this study were the facts that two-thirds of the 73 patients upon whom the basal metabolism was determined, proved to have a distinct elevation of their rates, indeed, in one case as high as +61 per cent above the average normal by Dubois's formula. Also, 25 out of the 100 patients with acromegaly proved to have or to have had glycosuria. These facts are the more striking when contrasted with the results of similar observations made upon *hypopituitary* cases with anatomically verified *chromophobe* tumors of the hypophysis. Thus, 107 such patients from Cushing's series, on whom metabolism studies were made, showed an average basal rate of -14 per cent and only 4 of the entire series showed a basal metabolic rate above zero, the highest of these being +11 per cent. In a similar manner, out of 168 verified cases of hypopituitarism only 4 showed a transient glycosuria as compared with the high incidence, 25 per cent, of glycosuria in acromegalics.

The question naturally arises as to the location of the mechanism responsible for these facts.

Let us first consider the elevated basal metabolic rate.

* Read before the New York Neurological Society, New York, N. Y., February 7, 1928.

One naturally wonders whether an accompanying hyperthyroidism independent of, or secondary to, the hyperpituitarism is responsible for the increased rate of combustion. It is a fact that the thyroid is often palpable, sometimes markedly enlarged, in acromegalic patients. Twenty-five out of our 100 cases showed a more or less enlarged thyroid gland. But only 25 per cent of our patients with elevated metabolic rates were among those showing enlarged thyroids. Moreover, if over activity on the part of the thyroid were responsible for the elevated rate of metabolism in acromegaly, one would expect to find some evidence of hyperactivity of the thyroid upon histological examination. Yet, in 4 of our cases that came to autopsy, in 3 of our patients who were, for one reason or another, subjected to thyroidectomy, and in practically all patients with acromegaly reported in the literature on whom histological examination of the thyroid gland was made, a simple colloid goiter was invariably found.

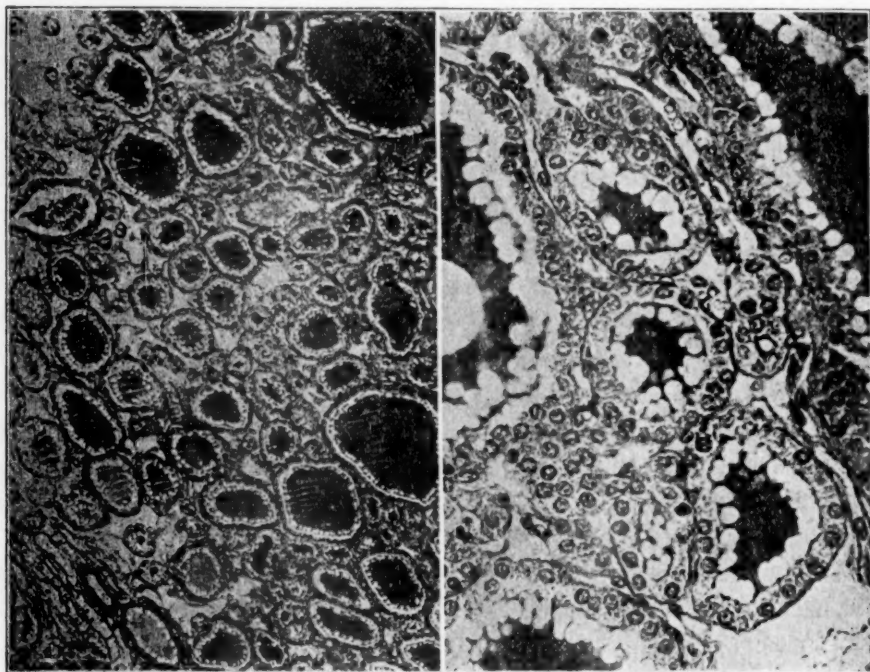


FIGURE 1

Adenomatous thyroid in a case of acromegaly with elevated basal metabolic rate. Hematoxylin and eosin stain: X80 (left); X300 (right).

Figure 1 shows sections from the thyroid of one of the three acromegalics operated for goiter owing to compression of the trachea. She had a preoperative basal metabolic rate of +61 per cent, yet as you see, the thyroid contains numerous colloid cysts with none of the evidence of hyperplasia seen in true thyrotoxicosis. Moreover, following sub-total thyroidectomy, her basal metabolic rate did not drop to normal, as might have been expected in an ordinary case of hyperthyroidism. With a single exception, also, the use of Lugol's solution was ineffective in reducing the metabolism in acromegalic patients in whom the basal rate was elevated.

We may thus fairly assume that the thyroid is not primarily involved in the elevation of the basal metabolic rate in acromegaly.

Now let us examine the evidence in favor of the hypophysis as prime factor in this increased rate of combustion. By analogy with the state of hyperthyroidism, an operative removal of the hyperactive gland should result in a symptomatic improvement of which the lowering of the metabolic rate is a more or less satisfactory measure, if the hyperactivity of the hypophysis were responsible for the increased metabolism. That this is actually the case may be

TABLE 1.—*The Basal Metabolic Rate of Patients with Acromegaly and That of Patients with Hypopituitarism*

	Number of cases	Average basal metabolic rate		Average drop in metabolic rate Per cent
		Before operation Per cent	After operation Per cent	
Acromegaly	17	+10.0	— 7.0	17.0
Hypopituitarism	24	—16.1	—17.7	1.6

seen in Table 1, summarizing the findings in 17 cases of acromegaly subjected to a partial hypophysectomy. We see here an average of +10 per cent above the normal basic rate in 17 cases of acromegaly before operation with an average of —7.0 per cent afterwards; that is to say, an average reduction of 17 points. Contrasted to this you will see the figures belonging to 24 cases of hypopituitarism with chromophobe adenomas. These patients showed an average pre-operative basal metabolic rate of —16 per cent and a post-operative rate of —17.7 per cent, a difference of only 1.6 per cent which may be considered within the limits of error.

The 17 cases quoted above included some patients having a basal

metabolic rate within normal limits before operation, who nevertheless, showed a distinct lowering in their already normal rates. But 9 operated cases of acromegaly are present in the Brigham Hospital series in which the basal metabolic rates were definitely elevated above the limits of normal and in which further metabolism studied were made after partial extirpation of the hypophyseal adenoma. Just a glance at Table 2 will show the uniform drop in

TABLE 2.—Changes in the Basal Metabolic Rate Before and After Operation

	Complica- tions	Before operation Per cent	After operation Per cent
1	Goiter	+18	+ 2
2 .....	.....	+15	+ 3
3 .....	.....	+21	+ 6
4 .....	.....	+31	+13
5 .....	.....	+32	+12
6	Diabetes	+38	+13
7	Glycosuria	+25	0
8 .....	.....	+24	+ 4
9 .....	.....	+16	+ 3

the metabolic rate following hypophysectomy in these as well. None of these 9 patients showed any clinical evidence of hyperthyroidism. Only one had an enlarged thyroid, but, like the others, no tachycardia, tremor, exophthalmos, or nervousness. It would seem, therefore, that the hypophyseal adenoma, which in each case consisted of exclusively acidophilic cells, was responsible for the elevated basal metabolic rate.

Considering now the possible explanation of the disturbed carbohydrate metabolism occurring in acromegaly. As stated above 25 per cent of our 100 acromegalic patients showed, at one time or another, varying degrees of glycosuria up to frank diabetes mellitus. This per centage is confirmed by the reports in the literature, and is obviously too high to be considered merely coincidental.

Two main trends exist in the various explanations of acromegalic diabetes.

1. *The Neurogenic.* It cannot be denied that important metabolism regulating centers exist in the hypothalamic region, yet the writers who believe that glycosuria is a result of pressure of the

tumor against this region have no satisfactory explanation for the fact that, in the case of hypopituitarism with chromophobe adenomas which occur more frequently than acromegaly, glycosuria rarely occurs, and is then only transient. In other words, they must explain why only one particular type of adenoma, irrespective of its size, is prone to cause symptoms of diabetes mellitus. This particular type of adenoma is composed of acidophilic cells characteristic of acromegaly.

2. *The Endocrine.* The thyroid which has been suggested by Lorand as responsible for the glycosuria in acromegaly may be quickly dismissed, for we have just seen that, in spite of an increased basal rate of metabolism, there is probably no hyperactivity of the thyroid. In the same way, the influence of the adrenal glands may be excluded, for, whereas the suprarenal cortex is almost invariably hypertrophied in acromegaly, the medulla is usually unchanged, and, as we know, it is the product of the latter, epinephrin, which, under the influence of the autonomic system, is capable of mobilizing sugar with the production of transient glycosuria.

We may, therefore, confine ourselves to the discussion of the pancreatic islets and the hypophysis in relation to this problem.

The high per centage of diabetes mellitus in acromegaly which is primarily a hypophyseal disease is in itself evidence that if the pancreas is alone at fault in these cases, its disturbance is brought about through the primary disturbance of the hypophysis. That these two glands are inter-dependent has been shown experimentally by Goetsch, Cushing, and Jacobson, who found that a sub-total pancreatectomy was much better borne by a previously hypophysectomized dog than was the case in a normal one. Moreover, if a depancreatized dog was subjected to the hypophysectomy his tolerance for sugar seemed to increase. In brief, it appeared from these experiments that pituitary and pancreatic secretions were mutually antagonistic, so that if there is an oversecretion on the part of the hypophysis as in acromegaly, it is to be expected that the pancreatic secretion will become neutralized to the point, often, of insufficiency, as is actually the case.

More directly, it has been shown by Burn, and confirmed by us on numerous occasions, that simultaneous injection of pituitrin and insulin fails to show the lowering of the blood sugar which follows injection of insulin alone.

Since no satisfactory active anterior lobe extract is as yet available this test cannot be applied to it, but it is to be expected that the secretion of the anterior lobe would show equal, if not greater, power to neutralize insulin.

In addition to the surprisingly high percentage of acromegalic patients that show either glycosuria or frank diabetes, we have observed that acromegalic patients who show no sugar in the urine may have a sub-normal capacity to dispose of carbohydrates when given intravenously.

We have carried out a blood sugar tolerance test on 10 such patients. This test consisted of injecting 0.5 gms. of glucose per kilogram of body weight, and then comparing the curve made by the blood sugar content taken at intervals thereafter, with the fasting blood sugar value of the same patient, and with an average normal curve.

Chart 1 shows the curves in these patients which are represented in fine lines for comparison with an average normal curve shown in heavy line. It will be noted that in practically every case the blood sugar rises at the end of one-half hour to a higher point in acromegalic patients, and drops more slowly than in the normals.

It thus seems fair to assume that there is a much greater number of acromegalics, perhaps, even the majority, suffering from impaired ability to metabolize carbohydrates than would appear by simple clinical tests. But what seems to us to be decisive evidence for the location of the seat of this disturbance is the fact that following partial extirpation of the pituitary tumor, this power to burn sugar increases.

In Chart 2 are seen the post-operative curves in six of the cases represented upon the previous chart. It is obvious at a glance how the curves have descended upon the normal one, some of them even falling slightly below normal. The post-operative tests were made, naturally after the effects of the operative procedure as such had passed away, and under conditions resembling those obtained during the pre-operative examination.

Chart 3 shows both the pre- and post-operative curves in the six cases cited above, continuous lines representing the curve before operation and the broken line after it. Case 1 had a mild degree of diabetes which cleared up following operation, although as you

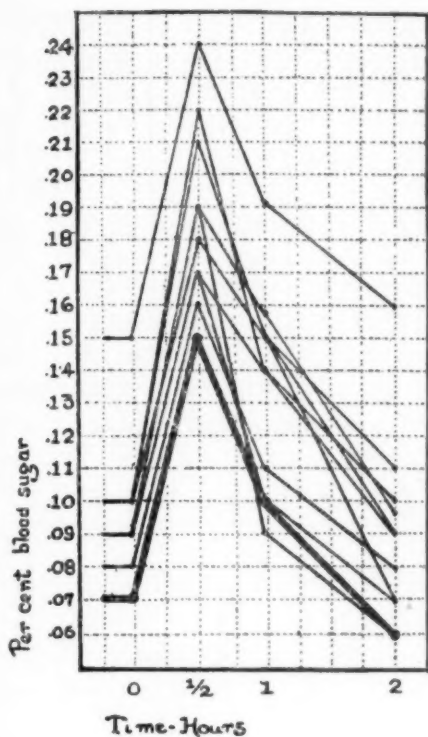


CHART 1

Preoperative blood sugar tolerance curves in six cases, and four curves in three additional cases in which operation was not performed. All superimposed, showing invariable decrease in sugar tolerance. Normal curve in heavy lines is for comparison.

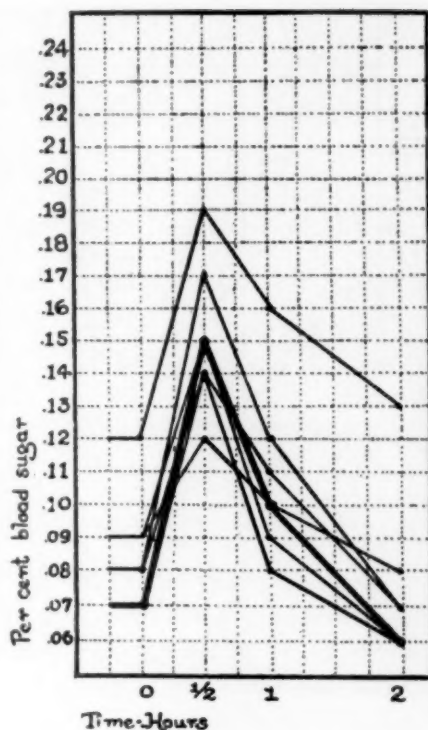


CHART 2

Postoperative blood sugar tolerance curves in six cases included in Chart 1, showing distinct lowering in sugar levels. (Increase in sugar tolerance).

see his fasting blood sugar is still at the upper limits of normal. Case II was a young woman of 24 whose complaint was increasing ugliness of features, and some headache. She had no disturbance of her visual fields, and indeed her sella turcia showed normal outlines upon roentgen examination. She was one of the few cases, therefore, who was operated for her acromegaly as such,—not, as is usually the case, for the relief of pressure upon the optic tract. One may venture to predict that as the technique of operating improves, the indications for operation will extend, as in the case of thyroid disease, beyond the crude ones of local pressure phenomena. In this patient, Dr. Cushing removed a generous portion of a slightly enlarged hypophysis, which proved, microscopically, nevertheless, to consist wholly of acidophilic adenomatous tissue. Not

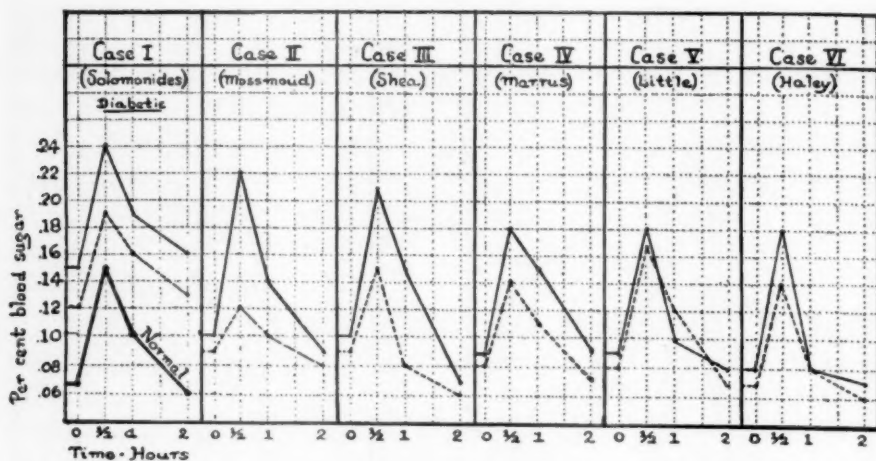


CHART 3

Blood sugar tolerance curves in six cases of acromegaly before (continuous) and after (broken lines) operation, showing a post operative lowering in the blood sugar levels. The heavy lines represent a normal curve for comparison.

only did her sugar tolerance improve after this operation, but her basal metabolic rate fell from an average of $+24$ per cent before operation to an average of $+4$ per cent. Her headaches disappeared and the actual size of her hands and feet decreased as well as some of the coarseness of her features.

It is also worthy of note that in Cases V and VI, in which the blood sugar curves were least affected by the operation, hardly more was accomplished at operation owing to technical difficulties, than the splitting of the dural capsule surrounding the tumor, and the removal of fragments for examination.

We may, therefore, deduce from these observations (1) that the function of metabolizing carbohydrates is frequently impaired in acromegaly, amounting in many cases to actual clinical diabetes mellitus, and (2) that the measures taken to reduce the hyperactivity of the pituitary anterior lobe seem to have a beneficial effect on the patient's ability to handle sugar.

Whether these findings indicate that the hypophysis may directly influence the capacity of the body to utilize carbohydrates, or, whether, the effect occurs only through some secondary disturbance of the glycolytic function of the pancreatic islets, there is as yet no positive way of determining. We are inclined to favor the latter view, but, in either case, the hypophysis seems to play the leading rôle.

THE RELATION BETWEEN BRAIN AND LIVER WEIGHTS IN EPILEPSY CONSIDERED FROM THE STANDPOINT OF ONSET AND DURATION IN ABOUT 200 CASES*

BY HAROLD A. PATTERSON, A. M., M. D., F. A. C. P.,

AND

SAMUEL M. WEINGROW, M. D.

Our attention was first invited to this subject by the papers of Myerson¹ and Thom² who have reported series of cases in which they have considered the relation between brain and liver weights in epilepsy as abnormal.

Myerson studied a group of 20 selected cases of young epileptics ranging from 25 to 40 years of age. These individuals were all well nourished and all "died of sudden diseases." According to this author, these cases were chosen so as to eliminate so far as was possible, such factors as tuberculosis, diarrhea, emaciation, etc. Most of them died of suffocation, acute lobar-pneumonia, oedema of the lungs and the like. Of his findings, Myerson³ writes as follows: "The results were rather surprising. In 13 cases the liver weighed 1,150 gm., the brain 1,260 gm., a very marked reversal of the expected ratio. In seven cases the liver weight averaged 1,350 gm., the brain 1,300 gm. That is to say there was in the smaller series a somewhat heavier liver than brain and in a larger series a much lighter liver than brain. It is, of course, obvious that so small a series is not sufficient from which to draw conclusions. Nevertheless it points out a line of research in epilepsy."

Thom's investigations were conducted on a series of 42 epileptic individuals in which the brain was found to be heavier than the liver in 62 per cent or 26 cases, and the brain was found to be lighter than the liver in 38 per cent or 16 cases. As in Myerson's group, these cases were carefully chosen to include an age range of from 17 to 45 years inclusive, both in order to insure development and maturity of the liver and at the same time to avoid senile retrograde changes. Speaking of their selection and of the results obtained with this group, Thom⁴ says: "Most of the cases in this series at the time of death were between 17-45 years of age. Pulmonary oedema, bronchopneumonia, lobar-pneumonia, status epi-

* From Craig Colony Laboratory.

lepticus and asphyxia were the causes of death in over 90 per cent of the cases, so that the gross lesions found at autopsy could not well be attributed to the terminal disease. It is in such a series as this that one might expect to find the normal 7-6 liver-brain ratio hold good; but it was the rather large number of cases, 26 (62 per cent), in this series where the brain outweighed the liver that I offer as an excuse for the publication of this note. I have put my comparative data in tabulated form and summarized them briefly to show that not only was there an abnormal relation existing between the liver and brain weights but in only a very limited number of cases did the weights of these organs fall within the limits of what I arbitrarily accepted as normal liver and brain weights. I have made no distinction between the normal weight of male and female organs, but have widened the normal limits to include both, viz., normal liver 1,500-1,800 grams; normal brain 1,250-1,400 grams.

"Of the 16 cases where the relative liver and brain weight was normal, in only two were the weights of the liver and brain both within normal limits in the same case, i. e., 40 of the 42 cases studied revealed either an abnormal relation between the liver and brain weights, or that one of the organs was of abnormal weight. In some cases both conditions were true. The most common gross abnormalities named in order of their frequency were as follows: Atrophy of liver, atrophy of brain, overweight of brain (probably due to oedema or hydrocephalus), hypertrophy of liver. The liver is most commonly diminished in size by some structural alteration such as cirrhosis, acute parenchymatous degeneration, and the hypertrophies are apt to be due to tumors, abscesses, fatty and amyloid degeneration, acute congestion and in some cases cirrhosis.

"The question now arises to what extent, if any, can the convulsion be attributed to those pathological changes found in the liver; or more broadly and more practically, to what extent can the abnormal functioning of a normal brain be due to structural changes in organs remote from the nervous system? * * * It would not be surprising to find that much of interest developed from a careful study of the visceral organs both, in the psychoses and epilepsies."

The point raised by both of the authors previously cited, that continued research in this field seemed not unpromising stimulated the writers of this paper to a further consideration of this problem

including, among other things, the approach to the question of brain-liver weight ratio in epilepsy from the standpoint of the onset and duration of the malady. For this purpose about 200 instances were carefully selected from a series of 800 autopsies so as to include only cases of so-called idiopathic epilepsy of both sexes, all with grand mal seizures and some with petit mal attacks in addition, between the ages of 16-50 years, inclusive, at the time of necropsy, where death was due to a sudden acute condition such as lobar-pneumonia, bronchopneumonia, pulmonary oedema, states epilepticus, asphyxiation and other similar disorders in which the nutrition of the patient was not affected. By exercising these precautions, it was possible to eliminate both those cases in which the liver had not yet attained its full development and those in which the organ was already undergoing senile retrogressive changes, as well as those instances in which the liver was affected by chronic wasting disease. As has been implied in the preceding use of the term "idiopathic", those cases were rejected in which a definite pathological condition that could reasonably be regarded as a probable cause of the epilepsy, was found in the brain at autopsy, such as abscess, chronic meningitis, cyst, fracture of the skull, gumma, tumor of the brain or meninges, tumor of bony structures impinging upon the cerebral substance, etc. Chief among the gross abnormalities found in the brains of the cases chosen were these, in the order named: Oedema, congestion, subarachnoid hydrops, softening, sclerosis, internal hydrocephalus, hemiatrophy, microgyria, microcephaly, macrogyria, acute meningitis, macrocephaly. The most common gross abnormalities encountered in the liver, named in the order of their frequency, were as follows: Chronic passive congestion, fatty degeneration, cirrhosis, amyloid degeneration. In order to render their results as comparable as possible with those of the preceding investigators the writers have accepted as the normal limits for brain and liver weights, respectively, the standards proposed by Thom, namely: normal brain 1,250-1,400 gms.; normal liver 1,500-1,800 gms.

The results obtained with the writers' material are given in the following tables: Table 1 shows the relation of the average brain and liver weights considered from the standpoint of the onset of the epilepsy; Table 2 presents data indicating the average brain-liver weight ratio regarded from the viewpoint of the duration of the malady.

174 RELATION BETWEEN BRAIN AND LIVER WEIGHTS IN EPILEPSY

TABLE 1. COMPARISON OF BRAIN AND LIVER WEIGHTS, GROUPED ACCORDING TO AGE AT ONSET OF EPILEPSY

Age at onset	Number		Average brain weight		Average liver weight	
	Males	Females	Males	Females	Males	Females
1 to 10 years.....	54	51	1,233	1,124	1,442	1,191
11 to 20 years.....	37	31	1,381	1,230	1,520	1,311
21 years and over.....	17	12	1,422	1,285	1,502	1,211
Total	108	94	1,313	1,180	1,478	1,233

TABLE 2. COMPARISON OF BRAIN AND LIVER WEIGHTS, GROUPED ACCORDING TO DURATION OF EPILEPSY

Age at onset	Number		Average brain weight		Average liver weight	
	Males	Females	Males	Females	Males	Females
1 to 10 years.....	33	21	1,408	1,215	1,566	1,216
11 to 20 years.....	49	28	1,281	1,206	1,375	1,165
21 years and over.....	35	42	1,257	1,169	1,509	1,187
Total	117	91	1,310	1,191	1,469	1,187

From the material offered in the preceding tables, it may be observed that the brain weight increases progressively with the delay in onset of the epilepsy and decreases similarly with the duration of the disease. Since, according to Vierordt⁵, maximum weight reached by the brain occurs at 15 for males and at 10 for females, the subsequent rise in brain weight with retarded onset is difficult to explain and suggests a need for continued study. With regard to the liver, one finds a somewhat more complicated picture. The weight of the liver likewise increases continuously with delay in onset of convulsive manifestations up to the time of its full development, after which there is a gradual but definite decline in the weight of the organ. For this decline the writers are unable to suggest any plausible explanation. It also remains as an interesting item of empirical observation which invites further research in this field. On the other hand, the liver diminishes steadily in weight with duration of the epilepsy up to the period of its complete development, and then subsequently shows an uninterrupted increase in weight. This behavior of the organ may be explained, a priori, by the theory that there is first a decrease in liver substance and that the later increase in weight is not due to hepatic tissue but

to pathological products developed during the course of the disease as occurs in cirrhosis of the liver. Whether this hypothesis is an actual explanation of the facts observed, the writers are unable to state at the present time as they have no evidence on this point. It may also be noted that the general average brain weight of the entire series falls within the lower limits of the normal range as previously defined, while the general average liver weight is appreciably below the arbitrarily accepted normal minimum. These findings are graphically illustrated in the succeeding charts.

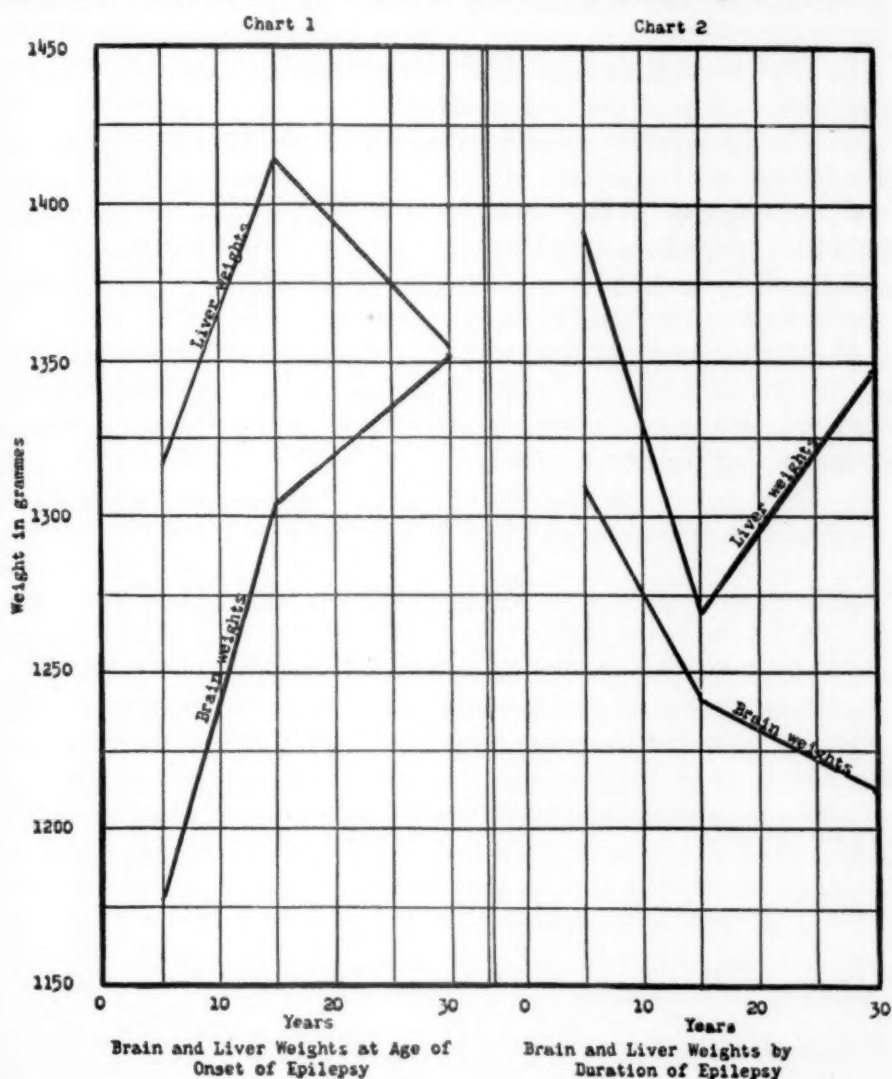


Chart 1 portrays the curves illustrating the brain-liver ratio from the aspect of the onset of the disease while Chart 2 delineates the same relation from the angle of the duration of the malady. Obviously, the brain-liver weight ratio for any given time is shown by that sector of the corresponding time ordinate lying between the two curves.

From the results obtained in their study of about 200 selected instances of so-called idiopathic epilepsy chosen from the records of 800 autopsy cases the writers feel justified in drawing the following conclusions:

1. The general average brain weight of the group falls within the lower limits of the normal range.
2. The general average liver weight of the group is below the accepted normal minimum.
3. In regard to the onset of the disease the brain weight increases progressively with delay in onset, while the liver weight also increases similarly up to the time of its full development, after which there is a gradual but definite decline.
4. With regard to the duration of the malady the brain shows a continuous reduction in weight as the disease progresses while the liver diminishes steadily in weight up to a certain period and then shows an uninterrupted increase.
5. The question of the relation between brain and liver weights in epilepsy seems to invite further investigation.

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CROSSROADS IN OCCUPATIONAL THERAPY*

BY WILLIAM C. GARVIN, M. D.

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The first element in developing an occupational therapy program in a mental hospital is to have a concrete idea of the work in view, and second, to secure a competent chief occupational therapist and aides, and organize the work.

The chief occupational therapist should be an individual with a good preliminary education and training in psychiatric rehabilitation. She should possess executive and organizing ability, tact, poise, be receptive to new ideas, have the power to stimulate her aides and others, and capacity for cooperating with the various hospital personnel elements. Above all she should have a psychiatric viewpoint in planning and directing the work of her department. The chief occupational therapist should permit aides who show initiative and originality, to try out practical ideas which they have developed, both as regards the work itself, and their plan of interesting patients in it. Nothing smothers ambition as much as a dose of cold criticism.

Aides should be selected not only from the standpoint of education and training, but also on account of possessing the necessary personality qualities so essential in establishing a "rapport", or, as the psychoanalysts term it, a "transference" between themselves and the patients who work under them. Kindergarten, grade, high school teachers, professors in college and employers in various lines who are endowed with these qualities, evoke the best efforts among those under their direction. Our patients are no exception to this rule. This quality of being able to establish a "transference" is a very important attribute in our work and has probably not been estimated sufficiently in evaluating occupational therapy procedures. This attribute comprises sympathy, understanding, kindness, interest, capacity for inducing confidence, and is non-critical at all times. It is also an invaluable asset for physicians engaged in the practice of psychiatry and in private practice as well.

It is not essential that an aide be a trained psychiatrist, as that is not her role, but it is necessary for her to possess some knowl-

* Read at Annual Institute for Chief Occupational Therapists, New York, March 21-23, 1928.

edge as to the whys and wherefores of the patients' conduct, and the reasons for his breakdown. A conference with the physician who has charge of the patient should give her some insight into the patient's mental twists, rehabilitation possibilities and the best methods of attack. This is essential, otherwise she is attempting to start going a piece of broken mental machinery knowing only its external aspects.

A physician should in every case fill out a prescription which seems best to meet the present condition of the patient and his reconstruction possibilities. Such prescriptions are often only tentative and have to be altered from time to time after watching the progress of the patient and consulting with the aide. The aide who is working daily with the patient is often able to give valuable suggestions along therapeutic lines. The physician should state on the prescription what he expects to accomplish by this therapeutic procedure. The physician should interview each patient before assigning him to the class, and explain to him the reason for such assignment, in order that the patient may gain an idea of what it is all about. The aide should also have a talk with the patient before he enters the class so as to make an initial contact and secure the patient's interest in the projected work.

Patients should not be kept at the same type of work day after day, even though they turn out an attractive and artistic article. Normal persons tire under the strain of monotonous daily repetition. Patients with disordered minds who tire and lose interest more readily than normal persons are no exception to this rule; this is often forgotten.

In order to have a record of the progress of the patient, and to accumulate accurate scientific data, the aide should keep a careful clinical record of the progress of each patient.

How very little we actually know, and how difficult it is to evaluate the various factors which bring about complete or partial mental readjustment. Even when patients recover and are willing to discuss the value to them of the various therapeutic procedures exerted in their behalf, how meager is our actual data. Some of this difficulty is due to the inability of patients to express themselves freely on account of limited education, while others are unwilling to discuss matters, wishing to forget their past experiences as though it

were a bad dream; or, then again, the mental conflict has been so largely unconsciously determined that the patient cannot bring it to the surface.

In the causation and restoration of mental dysfunction there is such an interplay of conscious and unconscious internal and external mental factors, and sometimes in addition, physical conditions, that it is a difficult matter to constellate the precipitating elements with any great surety. We, therefore, should not over emphasize occupational therapy as a reconstructive force, but should be modest in our claims as to its importance and value, meanwhile bearing in mind that other important factors undoubtedly enter into the situation. Occupational therapy is one of the most important adjuncts in our therapeutic armamentarium, but used without thought or permitted to degenerate into dull routine, is a waste of time and money. It should not be practiced as a thing apart from the general reconstruction work of the hospital, but should operate as a closely dovetailed constituent element of the entire reconstruction program. The occupational therapy movement has, to all, unprejudiced observers, demonstrated its value as a therapeutic procedure and it should be utilized to the utmost now in the interest of our patients. The appointment of Mrs. Eleanor C. Slagle as director of occupational therapy by the New York State Hospital Commission, headed by Dr. C. Floyd Haviland, chairman, July 1, 1922, marked the introduction of systematized, organized effort in the field of occupational therapy among our State hospitals. Great credit is due Mrs. Slagle for the work she has performed in this field.

Has not the time arrived to evaluate carefully our occupational therapy experiences and to consider whither we are going? Are we not attempting to cover too much ground with the force at our disposal? There is a limit to the number of patients that an aide can profitably instruct each day. Mere numbers mean nothing in themselves; it is the intensity and character of the effort that counts. In other words, a good rule to follow, is not to attempt too much occupation, but to practice more therapy. The object of crafts, a therapeutic one, is to awaken new and revive dormant interests, thus aiding in diverting the patient's mind from his troubles and to have him perform some simple constructive work

each day, all with the object of assisting the patient to regain the road to mental health. The product is not as important as the therapeutic effect it has on the patient. This does not mean, however, that an attractive, artistic type of work cannot be planned for the more advanced classes. Most appreciative patients enjoy creating something that is admired.

None of the hospitals have a sufficient number of aides to cover the entire field of therapeutic endeavor. Every patient who possesses rehabilitation potentialities should have his chance. With the limited occupational therapy force at our disposal, this is practically impossible, nor is it likely that Legislatures will go on indefinitely creating new items for occupational therapists. Moreover, at the present time we have difficulty in securing trained aides at the salaries offered. What, then, is to be done in order to reach the large number of patients who are not now included in our occupational therapy programs? The simplest plan, it appears to me, would be to utilize the large number of employees which comprise the ward force. It may be said that they have no educational background nor technical experience. This is not an insuperable obstacle. With some training in theoretical and practical work, they can be educated to carry on certain branches of the work quite successfully. This training could be carried out in centers or on wards set apart for this purpose, where practical work with patients is emphasized. The work could comprise certain crafts, and participation and leadership in physical exercises, amusements and recreation. At the St. Lawrence State Hospital new attendants participate at once in the various occupational therapy ward activities.

Certain centers could continue to be utilized for the training of special groups of patients as at present. When patients attain a certain degree of proficiency in any particular branch of work and therapeutic progress is made, they should not be retained in the centers. This is a bad practice, as it tends to "freeze" in the centers the same old group of patients. There should be an inflow and outflow of patients. Patients who show improvement should be transferred to one of the newly-formed ward classes. This would create vacancies for other patients who are entitled to an opportunity for therapeutic endeavor. In hospitals where there are a sufficient number of centers to contain all the patients who offer

rehabilitation possibilities, this does not apply, but I imagine there are few such institutions. It is probably true that a change from the wards to the centers has a certain therapeutic value, but under existing circumstances this ideal condition is not possible. Disturbed or suicidal patients cannot very well be brought to distant centers for work; if this is done, an additional number of attendants must be detailed for their supervision. Therefore arrangements should be made to establish occupational therapy classes on the wards housing such patients, unless the building affords other suitable space. A number of the aides could be assigned as instructors, and after a member of the ward force had attained a sufficient degree of proficiency, she or he could be placed in charge of one of the ward classes. In time, as the trained ward force grew larger and larger, the number of classes would be multiplied and each patient offering possibilities for rehabilitation would get what he is entitled to, viz., an opportunity at therapeutic reconstruction.

Those aides not engaged in highly specialized work with special groups of patients, could be detailed to visit daily a number of wards to stimulate those of the ward force in charge of classes, and to continue their instruction.

Too many of our graduate nurses develop into routine housekeepers. This is especially true on the wards housing the more chronic type of patients. There is no good reason why this element of the ward force might not first be utilized with advantage in such a program as I have outlined. I am sure that doing something constructive for their patients would stimulate their interest, make the time pass more quickly and prove a benefit to their mental and physical health, as well as that of the patients under their charge. A daily program of work, physical exercise, amusements and recreations, would, naturally, have to be worked out for each ward service according to the type of patients lodged thereon. At the present time ward classes work on a schedule and very often for only half a day or every other day. Under the system of utilizing the ward force, morning and afternoon classes could be held. This would be a decided advantage, as the patients would be under more continuous direction.

Such a program might at first meet with some opposition on the part of the ward force. Many excuses for their inability to partici-

pate in such a rehabilitation scheme would be offered, among them shortage of ward attendants, constant changes in ward personnel, interference with the routine ward work, and the like. These objections could be overcome by taking one ward at a time and demonstrating the practicability of such a program. New attendants would fall into line without any great difficulty. Pupil nurses would find such a system of training of great benefit to them during their period of training, and after graduation or upon in engaging in psychiatric nursing in private practice. Moreover, such a program would tend to dissipate the antagonism which often exists between the ward and the occupational therapy forces. All would be working together for the benefit of the patients, and that is what we are paid for.

To carry such a program into effect needs more intensive medical supervision of occupational therapy. This has worked out well in other therapeutic and service units. I believe the best way to attain this end would be to detail a full-time interested physician to have general supervision of all the occupational therapy work of the hospital. Heretofore the medical direction has been spotty and often indifferent. The aides have had my sympathy; they have been groping their way without much medical direction and assistance, and deserve a lot of credit for their persistence and enthusiasm. One obstacle in making such an assignment lies in the shortage of medical personnel. This has resulted in our more experienced physicians being overloaded with work. We are in hopes of being able to detail a full-time physician for such work when our medical staff vacancies are filled. We have been anticipating this for a long time, but have not yet given up in despair. I have in my mind outlined the work of such a physician as follows: He would visit the reception service and interview all new patients, study their case history and form an estimate of their rehabilitation possibilities, consult with the aide or ward employee in charge of the reception service occupational therapy classes, and write out the most suitable O. T. prescription. I would emphasize the point that patients should engage in therapeutic occupational therapy as soon as possible after admission to the reception service. In the larger hospitals, two physicians, one for each sex, might have to be assigned to the work. My observation has been that physicians in charge of reception serv-

ices which admit large numbers of patients annually, are so engrossed in grinding out case histories. (This is actually a suitable term for it) presenting patients at staff meetings, caring for sick patients and attending to other multifarious duties, that they have little time for occupational therapy or anything other than the routine work. At the present time our clinical director has general supervision of the occupational therapy work of the hospital, but he has not the time to devote to the work which it demands.

The occupational therapy physician would keep track of the patient not only on the reception service, but also on his transfer to another ward and continue his interest in him. The patient would be assigned to one of the ward classes, or form one of the groups in a center, or be transferred to outdoor work, or to one of the industries or farms, if he seemed a suitable case. In this plan of procedure the patient would not be lost sight of, and the habit of work developed from the day of admission (if he were capable of it) would be continued throughout his hospital residence. The occupational therapy physician could also take charge of the matter of selecting and placing suitable patients in the industries, ground squads, farm groups, etc. This of course, after consultation with the ward physician.

This physician would hold conferences from time to time with the occupational therapy and ward force engaged in the reconstruction work, in which various problems that come up would be discussed and settled. He would give a course of lectures on the psychology of occupational therapy for the aides, nursing force and physicians. He would also visit the various wards of the hospital where classes had been formed and discuss on the spot with the ward physician and aide the particular problem that needed solution. The fact that an interested physician had been detailed for the work would tend to iron out differences, promote cooperation between ward physicians, occupational therapists, nursing and industrial personnel of the hospital, and give each individual patient included in the program outlined above, an opportunity for mental restoration.

The effect of such a plan upon the physicians of our district, and the relatives and friends of our patients would be to raise their opinion of the work of the hospital immeasurably.

PROFESSIONAL TRAINING IN OCCUPATIONAL THERAPY

BY T. B. KIDNER,

PRESIDENT, AMERICAN OCCUPATIONAL THERAPY ASSOCIATION

The development of professional training for occupational therapists has taken place within the past twenty years and it is therefore a comparatively easy matter to review it.

At the outset, it may be noted that this development has proceeded by stages that were similar to the stages of development of professional training in other fields of work; somewhat as follows:

In the beginning, successful work that was being done here and there with patients by persons of vision and faith (though perhaps without any special theories or much skill) attracted the attention of far-seeing leaders in the field of hospital and social work. In consequence, some of these leaders decided after a time that it might be worth while to attempt to train some workers for this new field of service for the sick and the disabled.

The first attempt of this sort was made by the Chicago School of Civics and Philanthropy, where, in 1908, a course was offered in "Invalid Occupation"; in which your director was, she informs me, enrolled in the first group of students.

The experience of that course which, I understand, was continued for several years, is exceedingly interesting in the light of developments in later years. It seems that those who planned the course thought it would be useful to nurses, social workers, hospital librarians and others as supplementary training for work that might be taken up by them as a sort of "side line." A little practice in simple handicrafts was provided; together with lectures which dealt to some extent with the psychological aspects of curative work, but, I understand, laid emphasis largely on its social value.

Here and there some mild attempts were made by graduates from this course to introduce curative occupations in hospitals, but in most instances the superficial nature of their training prevented their work being a marked success.

As a result, it was felt by some leaders in the hospital world, particularly in the field of psychiatry, that if the full possibilities of this new type of treatment were to be realized, some more definite

training must be provided. In consequence, the first real school for the professional training of occupational therapists was established—the Henry Favill School, Chicago, of which your director was the head and its chief inspiration.

Some of this audience know what the existence of that course of training meant in the early days of the World War; for it was at first the only source of supply of trained occupational therapists for the war hospitals. Even before the United States entered the World War, the Henry Favill School and its director had been of great help to Canada in dealing with the disabled members of the Canadian Expeditionary Force.

The demands for workers for the U. S. Army Hospitals became so great that by 1918 many training courses were in operation. Most of the courses were, however, very sketchy and superficial, and only the high ideals and devotion of the great majority of the fine young women who received their training in them made them of any effect whatever. In many instances, the training offered consisted almost entirely of instruction in simple handicrafts. In point of fact, most of the graduates of those hastily devised emergency training courses got their real training in dealing with the disabled later on, in the hospitals.

By the year 1919, our American Occupational Therapy Association was, if I may use a racing term, “getting into its stride”, and occupational therapy was coming to be recognized as a real profession. From its very inception, the founders of the association had realized the necessity of paying special attention to the question of the proper training of workers; and a standing Committee on Teaching Methods (training) was provided for in the original constitution of the association.

From time to time, this committee had reported on the question of training courses, and the association decided at, I think, the 1920 annual meeting, that the time had come to set up minimum standards of professional training, such as are required in all professions nowadays.

The studies and investigations necessary to determine such standards took considerable time and much labor on the part of the committee, but a complete statement of minimum requirements was prepared and presented to the members at the annual meeting in Milwaukee in 1923, when it was unanimously adopted.

May I review, briefly, what these standards included. First, certain pre-requisites for admission to a training school with which candidates must comply. Second, a minimum course of twelve months, to include not less than eight months of theoretical and practical work in the school and not less than three months of hospital practice-training under supervision.

Thirdly, and this was of prime importance, the minimum standards called for lectures in the several principal fields of medicine and surgery; on other types of therapy; on mental hygiene; on social service as developed for different types of hospitals; on the work of the several types of hospitals and the principles of their management and of hospital ethics. All these things were required in addition to lectures in the history and development of curative occupations and of arts and crafts in relation to the development of civilization; on modern industry and the factory system; and on the relation of occupational therapy to vocational rehabilitation.

I need not particularize the requirements for practical training in arts and crafts, but they were very comprehensive, and included drawing and design.

It is gratifying today to look back on the work of the association in this matter of the establishment of minimum standards of training. As soon as they were promulgated, the best of the schools arranged to meet the requirements and some of the schools exceeded them. Schools that did not meet the requirements became discredited, and only a very few courses that do not meet the minimum requirements are in existence today. Needless to say, the American Occupational Therapy Association does not make any attempt to place the graduates of such schools in positions, and in time, the few schools of this type will probably cease to operate.

I desire now to refer to a step taken at the annual meeting of the American Occupational Therapy Association in Minneapolis last October which I think was of great significance; namely, the unanimous decision of the members to increase the minimum period of hospital practice training from three to six months. (It should be added that some members were in favor of requiring a minimum of nine months' practice training before graduation; which is already required by some of the training schools.)

My reasons for thinking this step to be of great significance is

that it is in line with the trend in other professions. Within the memory of many persons living today, the entrance to all professions was by apprenticeship. The young man who wished to become a doctor, or a lawyer, or an architect, etc., bound himself by an indenture of agreement to a man practicing the chosen profession and learned, as we say nowadays, "on the job", by actual practice.

The establishment of professional schools in various lines during the past few decades put an end to that system of learning a profession. Today, however, there seems to be a definite trend in several of the leading professions towards a revival to some extent of the older system; whereby students will spend less time in the professional schools, and more in actual practice. Anyone who has followed the discussions, for example, of the Committee on Licensure and Education of the American Medical Association during the past two or three years will have noted a definite demand for more hospital practice.

In my judgment, the truth of the matter was voiced long ago by Professor Huxley who said, in the "eighties" of the last century when England was developing its system of technological training, "We have come to the conclusion that, while it may not be possible to teach a trade or a profession in a school, it is not possible to teach it without a school." In other words, a judicious combination of both school and practice is the ideal.

I was led to deal with this phase of the question for two reasons. First, more of you will, I hope, as time goes on, have the great advantage of receiving undergraduate students in your departments, and I bespeak for them your interest and help. The great advantage of which I have just spoken has been testified to by various chief occupational therapists who have had the experience of receiving such students. Also, in the related field of medical training the advantage of being a teaching hospital is generally recognized by hospital authorities today.

The second reason I have for mentioning hospital practice training today is that my audience is composed of workers in large State mental hospitals.

As in the related field of psychiatric nursing, it does not appear to be at present feasible in large public mental hospitals to employ a sufficient number of professionally-trained personnel for occupa-

tional therapy. The necessity therefore has arisen for developing, from among the more intelligent members of the attendant group, helpers for the professionally-trained occupational therapists, and this necessity must be recognized.

Most of you are well aware of this and have proved by experience the value of such helpers, but I have heard in some quarters expressions of fear that a recognition of the need for helpers who have been trained "on the job" might militate against the professionally-trained worker. I am confident, however, that these fears are groundless. Notwithstanding the widespread use of the "practical nurse" in all large mental hospitals today, the status of the professionally-trained nurse is higher than ever, and it will be in this related field of occupational therapy. If our occupational therapy training schools continue to live up to their high ideals, there will always be room for their graduates as leaders and supervisors in all types of hospitals.

Instruction in the aims and methods of occupational therapy for nurses in training has already been provided for in your hospitals under an excellent syllabus drawn up by your director.

This leads me to my last point; namely, that if it is to attain its full possibilities of service in your hospitals, occupational therapy must not be in a "water-tight compartment." This was well brought out by Dr. Garvin in his very constructive address this morning when he spoke of the coordinating of all the various therapeutic activities, and their "dovetailing" each into the others. Doctors, nurses, occupational therapists, and attendants each have their part to play in the rehabilitation of the patients entrusted to their care. It is our hope and belief that curative occupations will become of even greater usefulness by more complete cooperation and a better understanding between the occupational therapy department and the other services.

PARENTAL GUIDANCE

BY DOUGLAS A. THOM, M. D.

The home, for generations past, has been looked upon as the workshop where children should be conditioned for social purposes. Training has been directed toward developing the individual capable of conforming to the demands of society, without undue effort, and with a fair degree of happiness and efficiency. Within recent years the prestige of the home, as the fundamental influence in child guidance has been challenged; and, either rightly or wrongly, it is being asserted that it is in spite of the home, rather than because of it, that many individuals reach the period of adolescence with a healthy outlook on life. Family life as such is undergoing a process of disintegration, and many of its responsibilities and obligations are now being delegated to nursery schools, kindergarten, summer camps, tutors, and nurses. An ever-increasing number of parents are beginning to assume that, like the family washing, the educational and moral welfare of the child can be more economically and efficiently cared for outside the home. To this attitude toward parental responsibilities may be blamed much of the criticism that is directed toward the younger generation of today.

Notwithstanding the criticism that has been directed toward the home and parents, the fact remains that both will long continue to be dominating factors about which the physical, mental, and moral welfare of the child must necessarily develop. Without trying to be unduly critical, an attempt has been made to point out concisely some of the most important stumbling blocks in the parent-child relationship, and present them in such a way that they will be of value in the task of guiding the parents.

As conditions exist at the present time, the responsibility for the development of desirable habits, and the preservation of the mental health of the child, remains in the hands of the parent and the teacher, and, in assuming this responsibility, they should look upon it as an obligation to equip themselves with available knowledge which is essential in the understanding of the underlying motives which govern conduct.

There are always tremendous difficulties encountered in dealing with any condition or situation which involves not only numerous factors, but factors which are constantly changing. This is always true in our efforts to solve problems which have to do with human conduct.

Because there is such a wide diversity in the constitutional make-up of each and every individual, and because these individuals are called upon to adjust themselves to environments that are so varied and so constantly changing, it is with great difficulty and always with more or less danger that broad generalizations are set forth, which can be applied successfully to any individual case.

Some important facts regarding child training have been so obvious that they have been entirely overlooked until recent years.

There is a well-defined group of children who are fundamentally problems in themselves—they would be problems in any environment and probably under any conditions, regardless of how favorable. They represent, however, but a limited number of the problem children with whom parents and teachers have to deal. Even the problems of these constitutionally neurotic children are always exaggerated by an unfavorable environment.

Children represent the raw material from which the future generation is to be produced. The number of queer, peculiar, eccentric, maladjusted individuals, the psychoneurotics and the criminals which are turned out from this undifferentiated mass, will depend largely upon the methods we, as adults, utilize in the process of socializing these children.

If the child who is dominated by his ego instincts which are constantly demanding pleasure and satisfaction from the rest of the world, seeking pleasure, praise, power, and protection, avoiding responsibility, pain, and punishment, is not socialized by training, education and experience, he will come in conflict, not only with society, which leads to criminality, but with himself, which results in poor mental health.

It is the hyper-active, mischievous, curious child, that is more apt to come in conflict with parental authority than the quiet, submissive, self-centered youngster, who is perhaps getting out of touch with the realities of life and presenting the first symptoms of maladjustment.

The faults of the children are too often considered food for neighborhood gossip, and the parental impressions of a child's inferiority are likely to be accepted at their face value by the child, leaving scars which future years will not eradicate.

Most of the serious conflicts occurring during the pre-school years, and the ones most likely to leave scars which will incapacitate in later life, are created by the personalities with which the child has to deal. Parents in their effort to obtain desirable conduct on the part of the child all too frequently resort to methods that reflect very clearly their own emotional instability.

Interest and love alone on the part of the parent are not enough to insure success in meeting the innumerable problems which are presented during the child's early years. In fact the very love that the parent bears for the child may be the stumbling block that prevents successfully fulfilling the obligations of parenthood. An intelligent approach to many of the problems of childhood is prevented by excessive worry, anxiety and needless fear on the part of the parents.

Parental handicaps due to mental defects, poor practical judgment, oversolicitude, unwarranted ambitions, self-centeredness, quick temper, rigid discipline, lack of sympathy, chronic invalidism, and a cold and forbidding attitude toward the child, all play an important part in the parent-child relationship.

The mental conflicts which so many parents have in their own lives both past and present, prevent a happy and healthy relationship between parent and child.

If it be that the personalities of the parents are inadequate, by virtue of intellectual defect, or their outlook on life becomes twisted and warped through emotional disturbances, it is not surprising that their discipline be reflected in the personality of the child.

Parents and teachers should not forget that just as the child has ears, eyes, heart, and lungs, he also has instincts and emotions. This immature individual has an inherent hunger for self-expression, which is constantly impinging upon a code of laws and customs of which he has little understanding. Keep in mind that the child has plans, hopes, and ambitions, has doubts, fears, and misgivings, has joys and sorrows, some slight and fanciful, other deep and real. His emotional life is gratified and thwarted much the same during the pre-school years as in later life.

The conduct of the child is simply his reaction to his environment. It is the result of a struggle between his instinctive strivings and the limitations and inhibitions set up by his environment. In order to understand the conduct of any human being, whether it be child or adult, whether found in the nursery or the prison, the conduct must be interpreted in terms of the individual's total experience, training, and education.

The environment that many normal children have the misfortune to inherit produces a healthy, antagonistic reaction on the part of the child in his effort to improve it. There is no logical reason why we should expect a normal child to adapt himself to an abnormal environment without a reaction that is apt to be looked upon as disobedience and rebellion, but which is actually indicative of stability, self-confidence, and independence.

Shyness, jealousy, fears, feelings of inferiority, and mental conflicts in general, often find an expression in tempers, destructiveness, cruelty, and such asocial tendencies as lying, stealing, truancy. Illness and incapacity may also result. Nothing is gained by treating the situation on a disciplinary basis with the idea of utilizing forcible measures to squelch the rebellion.

Threats, frightening, and efforts to beat the child into submission do nothing more than exaggerate and perpetuate the mental conflict.

The rod is about as useful in trying to cure diphtheria as it is in altering conditions which are activated by motives unconscious to the child. The important aspect of the child's environment is represented by the personalities with whom he comes in contact, to which he has to adjust his life, and to whose authority he must submit.

The parents who depend upon threats and punishments to obtain desirable conduct from the child may be gratifying, for the moment at least, their own sense of power, but they are doing little or nothing to make the child work toward the desired end.

Cheating the child should be held in the same contempt as cheating the adult.

There is no greater affliction that can be thrust upon the child than inheriting the type of parent who refuses to allow him to grow up.

There is a tendency on the part of the parent to mold the child according to certain pre-conceived ideas disregarding the material at hand—the child's emotional reactions, his stamina of will and, in general, the mental characteristics that go to make up his personality.

The parental attitude is often one of domineering intolerance. Quite unconsciously we insult, humiliate, tease, ridicule and cheat and, perhaps worst of all, we bore the child with our superior and intolerant attitudes. Not only are we indifferent, but oftentimes absolutely ignorant of the unhealthy mental atmosphere which we create for the child in this way.

Knowledge regarding mental hygiene must become common property, and be practiced by all concerned in the welfare of the child.

MENTAL DISEASE AMONG JEWS

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Much has been written over a period of years regarding the incidence of mental diseases among Jews, and from insufficient data deductions have been made that Jews suffer in undue proportion from mental disease. Dr. A. A. Brill, writing upon the subject "The Adjustment of the Jew to the American Environment" in *Mental Hygiene* for April, 1918, took occasion to spike the assertion made for years by the psychiatric world that the Jewish race had a disproportionate share of mental disease. Dr. Brill pointed out that even in 1918 some investigators had already begun to doubt the traditional view, and that they had found that there was little evidence that the Jew was especially liable to mental disease.

The first careful investigations were made by Sichel in Germany, who found that although there were relatively more Jewish patients than Jewish population in Frankfurt; yet this obtained only in reference to certain groups of mental diseases, while in other groups the rate was less among Jews than among the non-Jewish population. Dr. George H. Kirby reached similar conclusions after examining the admissions to the Manhattan State Hospital from October 1, 1907, to September 30, 1908. He found only one Jewish case of alcoholic insanity, and that very doubtful, among 182 cases of alcoholic insanity. There were also few Jews in senile dementia and other organic groups of mental diseases. On the other hand it was found that Jews "outnumbered enormously" any race in the large group of the so-called functional psychoses, or those mental disorders due to psychogenetic factors. Dr. Kirby concluded that the Jews do not contribute a disproportionate number of insane. Drs. Brill and Karpas, writing in 1914, reported the results of an investigation conducted by them of the admissions to the Manhattan State Hospital for four consecutive years (1908-1912) and came to the same conclusion as that reached by Dr. Kirby. The latter

study covered admissions from Manhattan and the Bronx. Jacob A. Goldberg in his volume "Social Aspects of the Treatment of the Insane" presents data concerning admissions from all parts of New York City to the Bellevue and Kings County Hospital Psychopathic wards for the years 1917-1919. These figures are in agreement with the findings of Drs. Kirby, Brill and Karpas.

There are several factors which have promoted a fuller study and analysis of the problem of mental disease among Jews. In the first place, the thought has been that to make more reliable deductions it would be advisable to study a larger number of hospital admissions than were dealt with in the above-mentioned studies. In the next place, restriction of immigration has undoubtedly had many effects as yet not fully understood upon various elements in our population, and upon different social problems, for the solution of which there exists a paucity of reliable data. Further, there has of recent years been considerable discussion as to the superiority and inferiority of certain racial stocks composing the American people. Such discussion has been augmented by the inadequate studies made for the Committee on Immigration of the House of Representatives relative to the racial distribution of physical, mental and social defects.

New York City would appear to be an admirable center for the study of mental diseases among Jews, both because of the presence of a large Jewish population, and of the existence of available data. Bellevue Hospital maintains a psychopathic department through which passes annually a large number of patients. The hospital history of these patients includes such items as age, sex, occupation, religion, nationality, type of psychosis, etc. The patients received in the course of a year furnish a fair sample of the entire population. From data obtained from these histories we may determine how the Jews compare with the non-Jews in the sample and how each group compares with the corresponding group in the general population.

The following study consists of an analysis of data secured at Bellevue Hospital together with similar data compiled from the reports of the New York State Hospital Commission. The period covered is from 1914 to 1926 inclusive. The study deals with the

comparative distribution by sex of mental diseases among Jews and non-Jews.

It should be pointed out to begin with, that there are certain limitations to the significance of the data as these determine the barriers to the extension of the analysis, and indicate the possible types of comparisons. It is clear that the significance of the frequencies of mentally diseased persons depends entirely upon the size of the original population from which they are selected. It is customary therefore to express the number of such individuals as a ratio; for example, so many per 100,000 population. From Federal and State censuses, together with data as to the nationality of patients as shown in the annual reports of the New York State Department of Mental Hygiene, it is possible to determine the rates of mental disease for categories such as native-born, foreign-born, native-born of foreign-born parents, etc., and even for many nationalities. It is unfortunately impossible to express such rates for Jews, because neither the Federal census nor the New York State census classifies the population so as to show the number of Jews. The result is that every statement concerning the number of Jews in New York City is nothing more than an indirect approximation, whose accuracy it is not possible to determine. Furthermore, just as death rates need correction for variations in age and sex, so rates for mental disease must be adjusted for these two factors, before comparison may be made accurately. Thus, even were one to assume that for rough purposes, the approximation to the total Jewish population might be of use, it would nevertheless be impossible to proceed with the corrections mentioned. In the absence of such basic data for the Jewish population, it must be recognized that it is not possible to state with accuracy whether or not the Jews have a higher rate of mental disease than non-Jews, nor whether the rate is changing from year to year. Such questions, at least with respect to the United States, must remain unanswered until such time as the official census gives basic data for the Jewish population.

Sex and age variations together with urban concentration have such intimate relations to rates of mental disease that it is seemingly worth while to examine some evidence on this point. These differences have been shown annually in the reports of the New York State Hospital Commission, now the Department of Mental

Hygiene, and have been demonstrated for the country as a whole in the U. S. Census Bulletin on Patients in Hospitals for Mental Disease, 1923. Thus, in urban communities, the first admission rate per 100,000 population is 78.8 as compared with 41.1 for the rural area. Furthermore, in both areas the male rate exceeds the female rate; in the urban area they are 89.6 and 67.8 respectively; and in the rural area the rates are 46.4 and 35.5 respectively. (See U. S. Census Bull., p. 38.) Again, the rates progress steadily with advancing age. Whereas the first admission rate for the country as a whole is 68.2 per 100,000 population, the rates begin with 1.4 in the groups under 15 years of age and progress to a maximum of 276.4 in the group aged 80 years and over.

Clearly, these factors are at work tending to increase unduly the number of Jewish patients in New York City as compared with the entire State hospital population. The Jewish population includes virtually no rural element to bring down the rate; and, the abnormal sex ratio, and high average age, both resulting almost entirely from the predominance of adult males among a recently immigrant population, tend to make the psychotic element disproportionately large. Further, the differences in sex and age composition even though available for the hospital groups, are of no significance in the absence of corresponding groups in the Jewish population. Not only, therefore, does there exist a lack of the rate for the Jews as a whole, but refinement of measures required by sex and age cannot be made. The study of the Bellevue data must consequently be limited almost entirely to an analysis of differences among Jews themselves, that is, intra-group variations, and to qualitative comparison with non-Jewish groups.

The study deals with 12,776 Jewish patients admitted to Bellevue Hospital during 1914-1926 inclusive. The following tables show the annual distributions, and a further subdivision according to type of psychosis. To achieve uniformity, and to permit comparison with other series of similar data, the classification of psychoses follows that adopted by the National Committee for Mental Hygiene and the American Psychiatric Association.

Considering the total number of admissions, a fairly steady increase is noted from year to year, the admissions in the Jewish group in 1926 exceeding those of 1914 by 43 per cent. In 1914

TABLE 1. JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND ALL NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

YEAR	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
1914	793	402	391	5,606	3,002	2,604
1915	880	494	386	5,451	2,852	2,599
1916	840	408	432	*4,307	*2,279	*2,028
1917	911	492	419	6,077	3,207	2,870
1918	973	521	452	5,965	3,105	2,860
1919	959	531	428	5,994	3,114	2,880
1920	976	521	455	5,880	2,992	2,888
1921	1,012	556	456	6,149	3,252	2,897
1922	1,025	527	498	6,220	3,357	2,863
1923	1,024	562	462	6,152	3,243	2,909
1924	1,057	574	483	6,153	3,265	2,888
1925	1,194	677	517	6,617	3,476	3,141
1926	1,132	604	528	6,559	3,572	2,987
Total	12,776	6,869	5,907	77,130	40,716	36,414

* Admissions are for nine months due to change in fiscal year.

there were 5,606 non-Jewish first admissions to the New York State hospitals, and in 1926 the corresponding total was 6,559. This represents an increase of only 17 per cent. On the basis of such a comparison there would be a keen temptation to conclude that mental disease increased two and one-half times as rapidly among Jews. But in view of the statistical limitations referred to above, one must beware of such an inference. For, had the Jewish population increased from two to three times as rapidly as the non-Jewish population of the State, a corresponding increase in psychotic patients would be expected. It is clear that the Jewish population has increased considerably since 1914, but in the absence of reliable census figures, the rates for each of the years cannot be computed. That the rates and not the total number of patients furnish the critical evidence may be seen from the following. As previously mentioned, the non-Jewish first admissions to the State hospitals increased 17 per cent from 1914 to 1926, whereas the general first admission rate actually dropped during this period from 70.0 per 100,000 population to 68.9. (See 38th Annual Report, New York State Hospital Commission, p. 125.) The possibility of a similar

reduction among Jews must therefore be admitted, even though the total number of patients may increase.

A better picture of the trend of annual admissions may be had by reference to Chart 1. To the graphs representing the annual admissions have been fitted straight line trends by the method of least squares. Taking the Jewish patients as a group and then

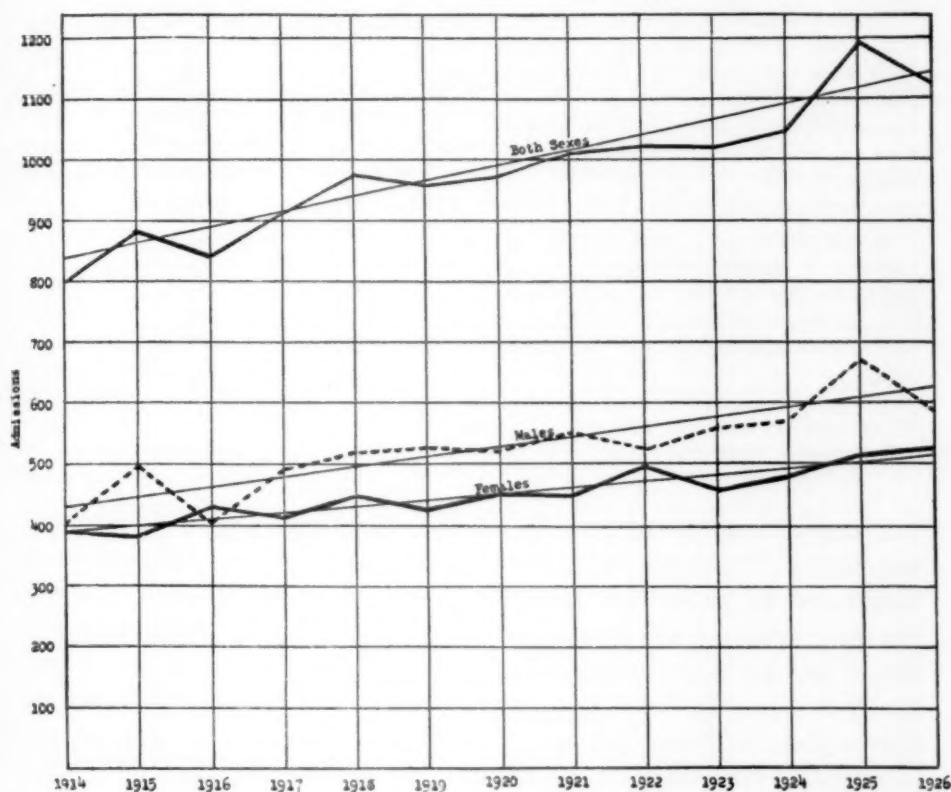


CHART 1. JEWISH PATIENTS ADMITTED TO PSYCHOPATHIC SERVICE OF BELLEVUE HOSPITAL, 1914-1926

treating the sexes similarly we find in each case a steady increase. The average annual increase appears to be 27.3, an increase of 16.7 for the males and 10.6 for the females. Whatever the rates of admission might disclose, we must nevertheless be prepared for an increasing Jewish population of mentally diseased. In view of the increasing percentage of seniles (to be commented upon further on), this is a significant fact.

TABLE 2. PSYCHOSES OF JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, 1914-1926

PSYCHOSES	Total	Males	Females
Traumatic	6	5	1
Senile	530	220	310
With cerebral arteriosclerosis	288	171	117
General paralysis	999	873	126
With cerebral syphilis	107	73	34
With brain tumor	15	11	4
With other brain or nervous diseases.....	419	255	164
Alcoholic	379	333	46
Due to drugs and other exogenous toxins.....	90	28	62
With other somatic diseases.....	195	62	133
Manic-depressive	4,485	1,827	2,658
Involution melancholia	152	39	113
Dementia præcox	2,791	1,661	1,130
Paranoia or paranoic conditions	176	82	94
Psychoneuroses and neuroses	230	93	137
With psychopathic personality	327	188	139
Undiagnosed psychoses	432	227	205
Total	*11,621	**6,148	***5,473

* Excluding 1,135 without psychosis and 20 unknown.

** Excluding 708 without psychosis and 13 unknown.

*** Excluding 427 without psychosis and 7 unknown.

The outstanding fact in Table 2 is the distribution by type of psychosis. Thus, out of the 11,621 Jewish patients subsequently diagnosed as psychotic, 4,485 were placed in the category of the manic-depressive psychoses, and 2,791 in that of dementia præcox. These two groups therefore account for 63 per cent of the entire number of psychotics. The significance of this fact is enhanced by comparison with the entire group of non-Jewish first admissions to the State hospitals, where 30,763 or only 40 per cent come in these two categories.

Further analysis of the admissions may be made on the basis of sex. As compared with the non-Jewish State hospital patients, the Jewish groups show some significant differences. Of the Jewish males, 57 per cent are in the manic-depressive and dementia præcox groups, as against 35 per cent of the corresponding control series. Of the Jewish females 69 per cent are in these groups, contrasted with 46 per cent in the State hospital group. Qualitative differences are indicated not only between Jewish and State hospital groups,

but also between males and females, irrespective of racial or national make-up. These important sex differences will be treated subsequently in greater detail.

If we treat the data of the preceding tables so as to change them from absolute figures to percentages, those classified as mentally diseased each year being taken as the base, some interesting results are obtained. The following table is based upon the total admissions for 1914-1926 inclusive.

TABLE 3. PER CENT DISTRIBUTION OF PSYCHOSES AMONG JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND ALL NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

PSYCHOSES	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
Traumatic	0.1	0.1	*...	0.4	0.6	0.1
Senile	4.6	3.6	5.7	10.4	8.3	12.9
With cerebral arteriosclerosis	2.4	2.8	2.1	8.0	9.0	6.9
General paralysis	8.6	14.2	2.3	12.3	18.9	5.2
With cerebral syphilis	0.9	1.2	0.6	0.7	0.9	0.6
With Huntington's chorea .....	...	...	...	0.2	0.1	0.1
With brain tumor	0.1	0.2	0.1	0.2	0.2	0.1
With other brain or nervous diseases	3.6	4.2	3.0	0.9	1.0	0.9
Alcoholic	3.3	5.4	0.8	5.7	8.6	2.9
Due to drugs and other exog. toxins	0.8	0.4	1.1	0.4	0.4	0.4
With pellagra .....	...	...	...	*...	*...	0.1
With other somatic diseases	1.7	1.0	2.4	2.6	1.7	3.7
Manic-depressive	38.6	29.7	48.6	14.1	9.8	19.1
Involution melancholia	1.3	0.6	2.1	3.4	1.9	5.2
Dementia præcox	24.0	27.0	20.6	26.3	25.4	26.6
Paranoia or paranoic conditions....	1.5	1.3	1.7	1.9	1.5	2.3
Epileptic psychoses .....	...	...	...	2.3	2.3	2.1
Psychoneuroses and neuroses	2.0	1.5	2.5	1.5	1.0	1.9
With psychopathic personality.....	2.8	3.1	2.6	2.3	2.3	2.2
With mental deficiency .....	...	...	...	2.5	2.2	2.7
Undiagnosed psychoses	3.7	3.7	3.8	3.9	3.9	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

* Less than 0.1 per cent.

As noted above, the outstanding groups among the Jews are the manic-depressive and dementia præcox psychoses. This emphasizes the indication of a difference in type between Jewish and non-

Jewish psychoses. But the difference must be placed upon a qualitative rather than upon a quantitative basis. Thus in relation to all psychoses, the functional psychoses among Jews have a higher ratio than the organic and other types. Whether the actual rates, i. e., for dementia præcox and manic-depressive psychoses per 100,000 Jews of the same age and sex groups, exceed those of the non-Jews, is still, however, an open question. Of the remaining groups, the outstanding ones are general paralysis, senility, cerebral arteriosclerosis, and to some extent alcoholism. Due to the importance of the functional psychoses, the organic psychoses do not appear of the same relative significance. Nevertheless, there is at least one point worthy of notice. It has long been held that the Jew has been relatively free from venereal disease. It is seemingly true that in the small town and village life of the mass of Jews in eastern European environments, with close family and community ties, there are high sexual standards. But apparently standards tend to break down in this country for various reasons involved in the whole matter of adjustment to a new environment, and with the loosening of strong family ties. Surely the fact that 10 per cent of these patients suffer directly or indirectly from the effects of syphilis, indicates a large source in the population from whom they are drawn.

The division by sex indicates certain variations. Thus, manic-depressive psychosis among the Jewish females stands out as the most significant of all, as almost half the females are included in this group alone. Relatively speaking, dementia præcox is more significant among the males than among the females. The other psychoses are fairly well distributed in small percentages among the females. The old time reputation of the Jew for moral staunchness is apparently upheld by the female, for, whereas, general paralysis constitutes 14.2 per cent among the males, it includes only 2.3 per cent of the females.

Disregarding the size of the actual ratios, and paying attention only to their order, a surprising agreement is found between the two groups. This appears to be due primarily to the fact that dementia præcox has become the outstanding problem in the State hospitals serving together with the manic-depressive psychoses to bring first rank to the functional psychoses in both groups. General

TABLE 4. RELATIVE RANK OF THE PSYCHOSES AMONG THE JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE OF BELLEVUE HOSPITAL AND NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

* PSYCHOSES	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
Traumatic	XVI	XVI	XVI	XV	XIV	XVI
Senile	IV	VI	III	IV	VI	III
With cerebral arteriosclerosis.....	VIII	VIII	IX	V	IV	IV
General paralysis	III	III	VIII	III	II	V
With cerebral syphilis.....	XIII	XI	XIV	XIII	XIII	XIII
With brain tumor	XV	XV	XV	XVI	XVI	XV
With other brain or nervous diseases..	V	V	IV	XII	XII	XII
Alcoholic	VI	IV	XIII	VI	V	VIII
Due to drugs & other exogenous toxins.	XIV	XIV	XII	XIV	XV	XIV
With other somatic diseases.....	X	XII	VII	VIII	IX	VII
Manic-depressive	I	I	I	II	III	II
Involution melancholia	XII	XIII	X	VII	VIII	VI
Dementia præcox	II	II	II	I	I	I
Paranoia or paranoic conditions....	XI	X	XI	X	X	IX
Psychoneuroses and neuroses.....	IX	IX	VI	XI	XI	XI
With psychopathic personality	VII	VII	V	IX	VII	X

* Psychosis with Huntington's chorea, psychosis with pellagra, epileptic psychosis and undiagnosed psychoses are omitted.

paralysis occupies a high rank among the males in both groups, and in the case of the males in the State hospitals, actually passes the manic-depressive psychoses to assume second place. In the case of the females, the order is reversed in the first two positions, the State hospital admissions leading with dementia præcox and manic-depressive psychoses in the order named, whereas the Jewish females lead with manic-depressive psychoses and follow with dementia præcox. The high percentages of these two groups necessarily lowers those of the other groups. It is a matter of note, however, that the State hospital females exceed the Jewish females in almost all the subsequent categories, especially in such as senile psychosis, psychosis with cerebral arteriosclerosis and general paralysis.

The data when treated by the method of rank correlation shows clearly the great similarity of the qualitative distributions. The rank correlations are as follows:

Bellevue patients and State hospital patients .....	.86
Bellevue males and State hospital males .....	.82
Bellevue females and State hospital females .....	.71
Bellevue males and Bellevue females .....	.74
State hospital males and State hospital females .....	.92

The qualitative differences may be better observed in the following table in which the psychoses have been grouped into the two primary categories of organic and functional, together with the additional classes of alcoholic and drug psychoses.

TABLE 5. PER CENT DISTRIBUTION OF GROUPS OF PSYCHOSES AMONG JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND ALL NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

PSYCHOSES	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
Alcoholic	3.3	5.4	0.8	5.7	8.6	2.9
Drug	0.8	0.4	1.1	0.4	0.4	0.4
Other organic	22.0	27.3	16.2	35.5	40.6	30.4
Functional	70.2	63.2	78.1	49.5	41.9	57.3
Other .....	...	...	...	5.0	4.6	5.0
Undiagnosed	3.7	3.7	3.8	3.9	3.9	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

The differences between the two groups are outstanding. The Bellevue group suffers predominantly from psychoses of a functional order. These, it is true, are also the largest group in the State hospitals, but the percentage is significantly lower than among the Jewish group. On the other hand, there is a difference in the reverse direction with respect to the organic psychoses. The Jewish group has a smaller percentage of alcoholics. In this connection it should be noted that to the psychopathic wards of Bellevue are brought alcoholics who may clear up sufficiently within a few days to permit them to go home to their friends or relatives. It thus becomes unnecessary to commit them to a State hospital.

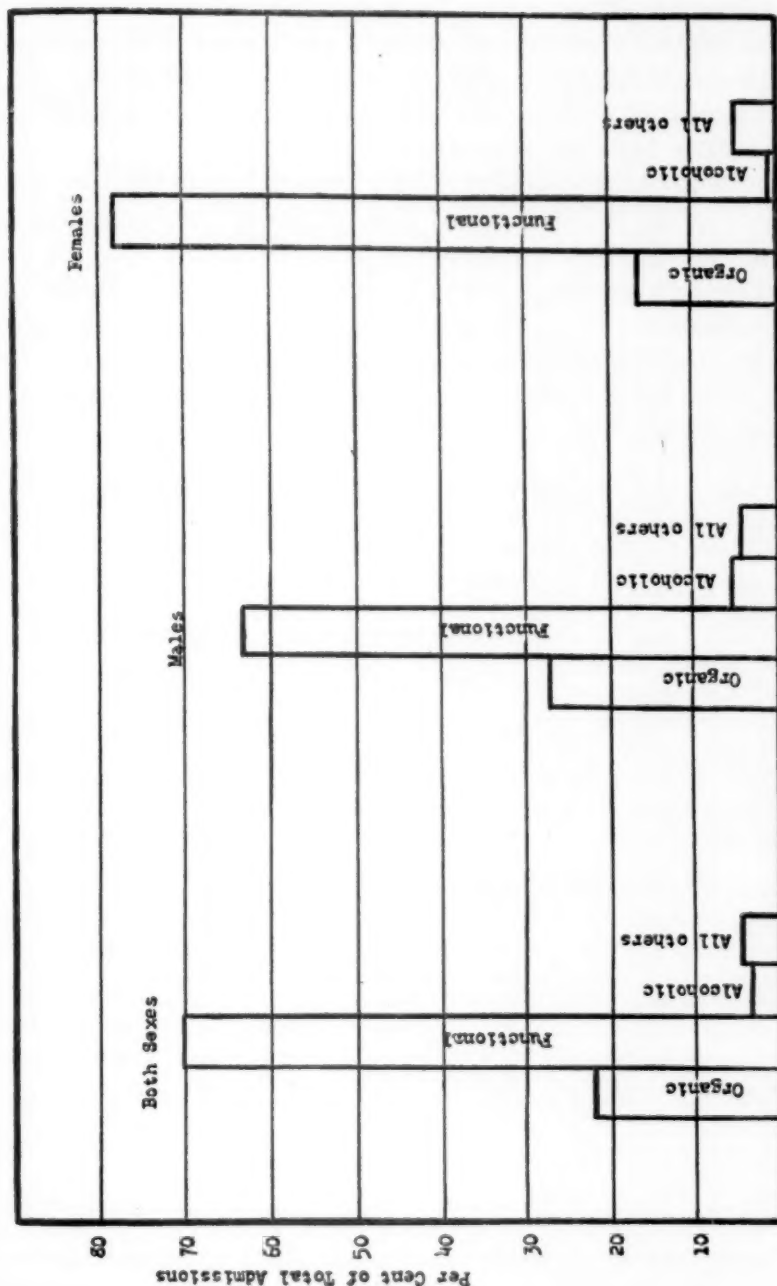


CHART 2. PER CENT DISTRIBUTION OF CERTAIN GROUPS OF PSYCHOSES AMONG JEWISH PATIENTS ADMITTED TO PSYCHOPATHIC SERVICE OF BELLEVUE HOSPITAL, 1914-1926

The alcoholics that are committed need institutional care provided by the State hospitals. Allowance should therefore be made in interpreting the percentage of Bellevue alcoholics for such as are not sent to State hospitals, and these form a considerable group of the total admitted to Bellevue. The same condition prevails in so far as the drug cases are concerned.

The following tables present some interesting data relating to the differences in the percentages of the psychoses from year to year. The first classification presented is that of certain organic psychoses including the following: Traumatic psychoses, senile psychosis, psychosis with cerebral arteriosclerosis, general paralysis, psychosis with cerebral syphilis, psychosis with brain tumor, psychosis with other brain or nervous disease, and psychosis with other somatic diseases.

TABLE 6. PER CENT OF CASES WITH CERTAIN ORGANIC† PSYCHOSES AMONG JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND AMONG NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

YEAR	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
1914	15.9	21.7	10.1	31.4	36.8	25.2
1915	21.6	27.9	13.6	32.9	40.0	25.1
1916	22.1	30.2	14.7	34.3	39.3	28.8
1917	21.8	28.6	14.3	31.8	36.8	26.2
1918	24.5	28.9	19.8	34.6	39.0	29.7
1919	26.8	32.2	20.7	35.7	41.0	29.8
1920	23.8	28.6	18.6	36.1	42.0	30.0
1921	21.9	27.4	15.5	34.0	*	*
1922	20.1	25.6	14.3	36.2	39.5	32.6
1923	20.4	26.0	13.9	37.9	42.6	32.9
1924	23.4	26.1	18.1	37.8	41.4	33.8
1925	21.5	24.4	17.7	38.1	42.4	33.4
1926	22.9	26.5	18.7	40.2	44.2	35.5
Total	21.7	26.8	15.8	35.5	40.6	30.4

† See text.

* No data available for 1921.

It is clear that in comparison with all other psychoses those of organic origin show an increasing trend. This is true of both groups and of both sexes.

We would expect these changes to be inversely correlated with the trend in the functional psychoses. Among the latter are included manic-depressive psychoses, dementia præcox, involution melancholia, paranoia, psychoneuroses and neuroses, and psychosis with psychopathic personality.

TABLE 7. PER CENT OF CASES WITH FUNCTIONAL† PSYCHOSES AMONG JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND AMONG NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

YEAR	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
1914	75.3	71.1	79.5	50.6	41.0	61.1
1915	72.1	66.2	79.6	53.1	43.9	63.0
1916	74.7	67.7	81.0	48.2	40.9	56.6
1917	76.3	68.9	84.4	48.6	39.4	59.1
1918	69.9	64.4	75.9	49.2	42.6	56.4
1919	67.5	62.3	73.4	49.8	42.7	57.7
1920	71.4	65.0	78.5	52.1	45.3	59.2
1921	70.4	63.3	78.8	52.6	*	*
1922	66.9	59.9	74.3	49.9	44.5	56.1
1923	70.3	61.1	81.1	48.0	41.8	54.7
1924	68.4	61.5	76.2	48.3	42.0	55.5
1925	67.6	59.4	78.2	47.2	39.7	55.4
1926	65.8	57.7	75.2	46.2	39.9	53.4
Total	69.2	62.8	76.3	49.5	41.9	57.3

A corresponding decrease is seen in the percentages ascribed to the functional psychoses. This is particularly clear in the Jewish group and is more marked among the males. The non-Jewish males in the State hospitals showed but slight fluctuations, but the females show a distinct decrease.

Observation of the course of some of the more important psychoses may be of interest; the following table deals with senile psychosis:

† See text.

* No data available for 1921.

TABLE 8. PER CENT OF CASES OF SENILE PSYCHOSES AMONG JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND AMONG NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

YEAR	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
1914	0.9	1.3	0.5	9.5	8.3	10.9
1915	4.0	3.1	5.3	10.3	8.6	12.1
1916	4.9	4.0	5.5	10.7	8.4	13.2
1917	5.0	4.3	5.8	9.2	7.2	11.4
1918	5.6	4.5	6.8	10.2	8.8	11.8
1919	6.3	5.7	7.0	10.8	9.7	12.0
1920	4.0	2.7	5.4	10.5	7.4	13.7
1921	4.3	2.8	6.0	9.8	*	*
1922	4.3	3.2	5.6	10.6	7.5	14.2
1923	3.2	1.8	4.9	11.4	8.4	14.7
1924	5.3	4.6	6.0	10.4	7.4	13.7
1925	5.2	4.5	6.0	10.8	8.6	13.3
1926	5.6	3.6	8.0	11.0	9.0	13.3
Total	4.3	3.4	5.4	10.4	8.3	12.9

* No data available for 1921.

TABLE 9. PER CENT OF CASES WITH CEREBRAL ARTERIOSCLEROSIS AMONG JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND AMONG NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

YEAR	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
1914	2.9	1.9	4.0	3.8	4.3	3.3
1915	0.6	0.9	0.3	4.2	5.1	3.2
1916	0.9	0.8	1.0	5.8	7.8	3.7
1917	0.2	0.5	...	6.2	7.6	4.7
1918	1.6	2.7	0.5	6.3	6.3	6.3
1919	2.2	3.1	1.2	6.4	7.4	5.3
1920	2.3	2.5	2.0	8.4	9.7	7.1
1921	2.4	3.8	0.8	8.4	*	*
1922	3.6	4.4	2.7	9.2	10.3	8.0
1923	3.0	2.8	3.2	9.5	11.3	7.6
1924	3.8	2.9	4.9	10.4	11.3	9.3
1925	3.2	2.9	3.5	10.6	11.3	9.9
1926	4.4	5.7	2.9	12.5	13.2	11.7
Total	2.4	2.6	2.2	8.0	9.0	6.9

* No data available for 1921.

The ratio of the senile psychoses to all psychoses has been almost constant in the State hospital group, whereas in the Bellevue group (omitting 1914 which appears suspiciously low), the ratio appears to be increasing steadily at least since 1920. The ratio is higher in the case of the females, which accords with the well-known fact of the greater longevity of the female. Increasing rates should be expected in the future, in view of the fact that in the course of the years the older age groups among the Jews will eventually increase.

The ratio of cerebral arteriosclerosis to all psychoses has clearly increased in all groups. The ratio is much larger in the State hospital group. Unlike the cases of senile psychosis, the male ratio exceeds the female ratio.

TABLE 10. PER CENT OF CASES OF GENERAL PARALYSIS AMONG JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND AMONG NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

YEAR	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
1914	9.1	14.4	3.7	12.8	19.5	5.1
1915	14.2	20.5	6.1	13.1	21.1	4.4
1916	10.0	18.5	2.4	13.0	18.8	6.5
1917	10.5	17.9	2.3	12.7	18.8	5.9
1918	10.2	17.4	2.4	13.6	20.5	6.1
1919	10.2	18.1	1.2	13.2	20.4	5.6
1920	8.7	15.2	1.5	12.4	20.1	4.4
1921	6.7	11.0	1.5	12.0	*	*
1922	6.6	11.4	1.6	12.0	17.6	5.5
1923	8.3	14.2	1.4	11.9	18.4	4.7
1924	6.4	10.1	2.2	12.0	18.1	5.2
1925	6.3	9.3	2.5	11.3	17.3	4.5
1926	6.8	11.0	1.9	11.3	16.8	4.7
Total	8.7	14.3	2.4	12.3	18.9	5.2

The State hospital ratios of general paralysis are clearly in excess of those among the Bellevue group. Since 1918-1919 there appears to be a decrease in both groups. There may be some relation between the decrease and the improved treatment of syphilis in recent years. The sex differences are noteworthy.

* No data available for 1921.

TABLE 11. PER CENT OF CASES OF ALCOHOLIC PSYCHOSES AMONG JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

YEAR	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
1914	0.5	0.8	0.3	8.5	11.9	4.5
1915	1.2	2.0	0.3	6.4	9.1	3.5
1916	2.2	0.8	3.4	6.9	9.5	4.1
1917	0.2	0.5	...	9.9	13.8	5.5
1918	2.0	3.1	0.7	6.0	8.3	3.4
1919	2.6	4.1	0.8	4.5	6.5	2.3
1920	1.7	3.0	0.3	2.1	3.0	1.1
1921	3.0	4.9	0.8	3.1	*	*
1922	4.2	7.8	0.5	3.6	5.7	1.1
1923	4.4	7.2	1.2	4.5	6.8	1.9
1924	5.8	10.1	0.9	6.0	9.2	2.4
1925	6.0	9.4	1.5	6.4	9.8	2.6
1926	6.2	11.2	0.4	6.5	9.4	3.0
Total	3.1	5.2	9.8	5.7	8.6	2.9

* No data available for 1921.

TABLE 12. PER CENT OF CASES OF MANIC-DEPRESSIVE PSYCHOSES AMONG THE JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND AMONG NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

Year	Jewish Patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
1914	47.9	38.8	57.1	16.2	11.6	21.5
1915	43.9	35.6	54.4	16.0	12.4	19.8
1916	52.2	40.4	62.9	16.5	10.7	23.0
1917	44.6	33.3	57.0	15.3	9.5	21.9
1918	35.3	23.4	48.2	13.2	9.6	17.1
1919	33.0	25.9	41.0	14.0	9.6	18.7
1920	38.3	31.4	45.8	12.8	8.4	17.4
1921	40.3	33.6	48.3	13.3	*	*
1922	33.9	25.8	42.4	14.4	9.8	19.6
1923	33.5	27.5	40.4	13.4	9.1	18.2
1924	33.3	27.5	40.0	13.6	9.8	17.9
1925	35.4	26.5	47.0	13.2	8.7	18.2
1926	35.8	23.5	50.1	12.7	8.8	17.3
Total	38.2	29.6	47.8	14.1	9.8	19.1

* No data available for 1921.

The interesting results in Table 11 are seen from the year 1920 onward. Up to that time the ratio of alcoholic psychoses had been decreasing among the State hospital population. Among the Bellevue group, the fluctuations have been very irregular, but from 1920 the ratios have been increasing steadily. Among the Jews the ratio increased until in 1922 it exceeded even that of the State hospitals. A possible explanation for this item has already been offered. In view of the increasing trend indicated in the above table, alcoholism may be looked upon as a relatively important factor for at least some time to come. The problem is clearly a masculine one, but even the females, especially in the State hospitals, show increasing ratios.

The greater percentage of the functional psychoses among Jews has already been commented upon. The percentage appears to have been decreasing since 1916, specially in the State hospitals. This is seen even more clearly in the division by sex. The decrease, however, must be expected in view of the increasing percentages in the other

TABLE 14. PER CENT OF CASES OF DEMENTIA PRAECOX AMONG JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND AMONG NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

Year	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
1914	20.2	24.9	15.5	22.8	20.6	25.3
1915	22.1	23.1	20.7	25.7	23.4	28.3
1916	16.1	21.7	11.1	22.9	23.7	22.1
1917	26.8	31.5	21.6	25.2	24.2	26.4
1918	28.8	35.4	21.7	27.0	26.7	27.3
1919	27.2	29.9	24.1	27.1	27.1	27.2
1920	23.5	25.7	21.0	29.2	29.1	29.1
1921	21.7	23.8	19.3	29.2	*	*
1922	24.4	27.1	21.4	25.9	26.6	25.1
1923	28.8	27.9	29.8	25.7	25.8	25.6
1924	26.7	27.3	26.1	26.9	26.4	27.4
1925	24.3	27.5	20.2	26.6	25.8	27.5
1926	20.5	24.7	15.6	25.9	25.4	26.4
Total	23.6	26.8	19.9	26.3	25.4	26.6

* No data available for 1921.

psychoses. If general paralysis and alcoholism, for example, show increasing percentages, the other psychoses must necessarily show decreasing ones. However, it is evident that the functional psychoses will long predominate among Jews.

The ratio of dementia præcox cases to those of all groups is greater in the State hospitals than in the Bellevue group. The Jewish females bring down the Bellevue ratio. It is clear that there has been little change in the ratio in the State hospital population since 1918. In the Bellevue group, however, the male ratio shows a definite decline from 1918 to 1922. In 1926, however, there was a sudden decrease even more marked in the case of females.

TABLE 16. PER CENT OF CASES OF PSYCHOSES WITH PSYCHOPATHIC PERSONALITY AMONG JEWISH PATIENTS ADMITTED TO THE PSYCHOPATHIC SERVICE, BELLEVUE HOSPITAL, AND AMONG NON-JEWISH FIRST ADMISSIONS TO THE NEW YORK STATE HOSPITALS, 1914-1926

YEAR	Jewish patients admitted to Bellevue Hospital			Non-Jewish first admissions to New York State Hospitals		
	Total	Males	Females	Total	Males	Females
1914	4.3	5.6	2.9	3.5	3.1	3.6
1915	4.0	4.4	3.6	4.0	3.6	4.4
1916	3.8	3.7	3.9	1.2	1.3	1.1
1917	2.4	2.0	2.8	1.5	1.4	1.9
1918	2.4	3.8	1.0	1.9	1.6	2.3
1919	2.3	3.3	1.2	1.7	1.7	1.7
1920	3.1	3.2	3.0	2.7	2.8	2.6
1921	2.4	0.6	4.5	2.6	*	*
1922	2.2	2.9	1.3	2.5	2.6	2.3
1923	1.8	2.4	1.2	2.4	2.3	2.4
1924	2.7	3.5	1.8	2.1	2.4	1.7
1925	3.2	2.2	4.4	1.7	2.2	1.1
1926	2.5	3.0	1.9	1.8	1.9	1.6
Total	2.8	3.0	2.5	2.3	2.3	2.2

* No data available for 1921.

The above table indicates higher ratios of psychoses with psychopathic personality in the Jewish group. The ratios in the State hospitals appear to be on the decline. The variations in the Jewish group show too great a fluctuation to indicate a definite trend. This indefiniteness is probably due to the small numbers included in the original groups.

CONCLUSIONS

I. It is impossible to compare relative frequency of mental disease among Jews and non-Jews owing to the absence of fundamental population data concerning these groups.

II. We may expect a continuous growth in the number of Jewish patients.

III. The two groups show qualitative differences, as follows:

(a) Compared with the non-Jews, the Jews show a higher percentage of functional psychoses and a lower percentage of organic psychoses.

(b) The percentages of senile psychoses and psychoses with cerebral arteriosclerosis are increasing among Jewish psychotics.

(c) The percentage of general paralysis admissions among Jewish males is rather high.

(d) The percentage of alcoholic psychoses among Jewish patients is low but is increasing in both sexes.

INCREASE OF PATIENTS IN THE CIVIL STATE HOSPITALS OF NEW YORK

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Four years ago this State undertook the enormous task of enlarging its hospital system to provide suitable accommodations for all patients with mental disease in need of hospital care. Buildings to accommodate 7,000 patients were needed to eliminate the overcrowding then existing and in addition it was estimated that it would be necessary to provide buildings for a normal increase of about 1,000 patients a year. On February 1, 1924, which was about the time the first installment of the \$50,000,000 bond issue was voted, the resident patient population of the civil State hospitals was 38,408 and the number of patients on parole 3,320; on February 1, 1928, four years later, the resident patient population was 43,823 and the number of patients on parole 3,879. The increase in resident patients during the four years was 5,415 and in paroles 559, the average annual increases being 1,354 and 140 respectively. The increase in patients on books during the past fiscal year was 1,891 and during the seven months from July 1, 1927 to February 1, 1928, 1,392, a total increase of 3,283 in the 19 months. Naturally this sudden doubling of the usual rate of increase gives rise to very serious problems.

Before attempting to analyze the increase of the past fiscal year I wish to refer to a bit of history that has a significant bearing on the situation confronting us. On June 1, 1917, on the request of the Hospital Development Commission I made an estimate of the probable increase of patients in the civil State hospitals during the period from 1917 to 1927. In making this estimate I assumed that the rate of increase of patients in the several State hospital districts during such period would be the same as that which had obtained during the period from 1907 to 1917. On June 1, 1917, the patients on the books of the civil State hospitals numbered 36,115. It was computed that the increase during the 10-year period would be 12,500 and that the patients on June 1, 1927, would number 48,615. The estimate fortunately was too large, the actual patient popula-

tion of the hospitals on that date being 46,122. This was approximately 2,500 less than the estimate. The increase during the ten years was 10,007, or approximately 1,000 a year, while the increase during the preceding ten years was 9,013 or a trifle over 900 a year. The percentage increase, however, during the period from 1917 to 1927 was 27.7 and during the preceding ten years 33.3.

Three outstanding causes operated during the years 1917-1920 to reduce the rate of increase. The first was the world war which nearly stopped immigration and which by reducing the medical and nursing personnel of the hospitals was indirectly a cause of the high death rate in the hospitals during these three years. The second cause was the influenza epidemic of 1918 and 1919, which with associated pneumonia, was responsible for the death of a large number of our patients as well as that of many persons who, had they lived, would have become patients in the State hospitals. The third cause was the restriction of the liquor traffic which began in 1918 and in a more less effective way has since continued. None of these events could have been foreseen and naturally they were not taken into consideration in our statistical estimates of 1917.

We now come to the consideration of the results of the fiscal year which ended June 30, 1927.

We have already stated that during such year the net increase of patients on books of the civil State hospitals was 1,891. The largest previous increase in any year was 1,442 in 1921. The average increase during the past ten years as we have seen was about 1,000. This large deviation in 1927 from the average increment of patients has special significance at this time, as our hospitals are seriously crowded and the construction of new hospitals entails a heavy burden on the State. I have therefore undertaken the task of analyzing this remarkable increase with a hope of getting a clearer view of the problem. I shall attempt to answer the following questions:

1. How was the increase influenced by admissions, discharges, deaths and paroles?
2. In what parts of the State did the increase occur?
3. In which forms of mental disease was the increase most marked?
4. Are like increases in mental patients occurring in other states?

5. What increases in mental patients may be expected in this State in the next 10 years?

In answering the first question I invite your attention to Table 1.

The first admissions of 1927 numbered 7,928, the largest number of any year for which we have record. The increase in first admissions over those of the previous year was 633. There was, however, a decrease of 69 in readmissions making a total net increase in admissions of 564. The discharges in 1927, excluding transfers, were 4,282, a decrease of 244 as compared with those of the preceding year. There was a total of 3,806 deaths of patients in 1927, a decrease of 301 compared with those of the preceding year. The death rate was 70 per 1,000 under treatment. This was lower than that of any preceding year since 1912. The patients on parole during the year increased by 405. Excluding paroles, we find the

TABLE 1. COMPARISON OF ADMISSIONS DISCHARGES, DEATHS AND HOSPITAL POPULATION, CIVIL STATE HOSPITALS, 1927 AND 1926

	1927	1926	Change in 1927
First admissions	7,928	7,295	+ 633
Readmissions	2,059	2,128	— 69
All admissions	9,987	9,423	+ 564
Discharges, excluding transfers	4,282	4,526	— 244
Deaths	3,806	4,107	— 301
Paroles	3,487	3,082	+ 405
Resident patients	42,823	41,337	+ 1,486
Patients on books	46,310	44,419	+ 1,891
Average daily population, excluding paroles....	42,121	40,866	+ 1,255
Male patients on books	22,096	21,002	+ 1,094
Female patients on books.....	24,214	23,417	+ 797
Male first admissions	4,364	3,966	+ 398
Female first admissions	3,564	3,329	+ 235
Male readmissions	954	1,014	— 60
Female readmissions	1,105	1,114	— 9
Patients on books per 100,000 of population....	433.1	419.8	+ 13.3
Urban first admissions	6,997	6,364	+ 633
Rural first admissions	898	913	— 15
(33 unascertained in 1927)			
Native first admissions	4,443	4,163	+ 280
Foreign-born first admissions	3,460	3,116	+ 344
(25 unascertained in 1927)			

increase in resident patients to be 1,486 and the increase in average daily population, 1,255. The increase in male patients on books was 1,094 and of female patients on the books 797. The increase in male

first admissions was 398 and in female first admissions 235. In 1926, the increases were as follows: Patients in institutions, males 558, females 260; first admissions, males 102 and females a decrease of 242. In the last two years among patients in hospitals the increase in males has been 595 more than in females. This disproportionate increase of the males is a matter of significance as female patients have always outnumbered males in the State hospitals.

Table 1 shows an increase in 1927 of 280 native first admissions and 344 foreign-born first admissions. This large increase in foreign-born cases is very remarkable in view of the fact that the Bureau of Special Examination removed 436 alien insane patients from the State during the fiscal year. There were also removed 807 non-resident insane, making total removals of 1,243 persons who otherwise would have swelled the population of our State hospitals.

2. *In what parts of the State did the increase occur?* Data to answer this question are given in Tables 2 and 3. Your attention is first directed to Table 2. Comparing first admissions in 1927 and 1926 in urban and rural communities of the State as a whole, we find an increase in 1927 of 633 in the former and a decrease of 15 in the latter. The environment of 33 cases was unascertained. The rate of first admissions per 100,000 of population was 72.5 in urban districts and 49.8 in rural districts. In this table a comparison is

TABLE 2. FIRST ADMISSIONS TO CIVIL STATE HOSPITALS FROM URBAN AND RURAL DISTRICTS IN NEW YORK STATE, 1917-1927

Year	Number		Rate per 100,000 population	
	Urban	Rural	Urban	Rural
1917	6,007	795	73.9	43.2
1918	5,906	876	71.3	48.0
1919	5,898	852	69.9	47.0
1920	5,715	823	69.5	45.8
1921	6,137	791	70.2	44.5
1922	6,177	803	69.4	45.6
1923	6,117	768	67.5	44.1
1924	6,136	781	66.5	45.3
1925	6,543	882	69.6	50.2
1926	6,364	913	66.7	51.3
1927	6,997	898	72.5	49.8

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given of first admissions from urban and rural districts from 1917 to 1927. In both environmental divisions the trend during this period in rates of first admissions per 100,000 of population has not undergone much change, but when absolute numbers are considered, it will be seen that the first admissions from cities have rapidly increased, those for 1927 being 1,282 more than those for 1920. The change in first admissions from rural districts has been comparatively slight, the difference between those of 1920 and those of 1927 being only 75.

TABLE 3. DISTRIBUTION BY COUNTY OF RESIDENCE OF INCREASE OF PATIENTS IN CIVIL STATE HOSPITALS, YEAR ENDED JUNE 30, 1927

County	Increase of patients on books	Increase of first admissions
Metropolitan district:		
Bronx	309	87
Kings	415	91
Nassau	19	— 3
New York	537	340
Queens	103	— 7
Richmond	20	8
Suffolk	16	11
Total	1,419	527
Up-State counties:		
Albany	21	— 19
Broome	36	11
Cattaraugus	19	— 2
Cortland	19	22
Dutchess	5	20
Erie	19	— 21
Herkimer	20	3
Montgomery	17	15
Niagara	35	31
Oneida	11	35
Onondaga	45	24
Rockland	26	22
Westchester	40	— 8
42 other counties	159	— 27
Total	472	106
Grand total	1,891	633

Referring now to Table 3, it will be noted that in the seven counties comprising the districts of the metropolitan hospitals there was in 1927 an increase of 1,419 patients on books and of 527 in first admissions. In the other 55 counties of the State the increases were only 472 and 106 respectively. The up-state counties having the largest increases are specified in the table. The counties listed include some but not all of the more populous counties of the State. The rural counties of Cortland, Montgomery and Rockland have increases in marked contrast to those of other rural sections. It is surprising also that Niagara and Onondaga should have larger increases than Erie and Monroe Counties. Notwithstanding the marked additions to patient population in the State as a whole and in urban centers, we find that in 31 counties there was a decrease in first admissions, the total reduction for this group being 199. From the data presented, it is evident that the problem of increase of patients is mainly an urban one and is most acute in the metropolitan district.

3. *In what forms of mental disease was the increase in 1927 most marked?* Answer to this question is found in Table 4. Taking up first the patients on books it is seen that increases occurred in 17 clinical groups and decreases in 5. The increases were most marked in the arteriosclerotic, paretic, alcoholic, manic-depressive and dementia præcox groups. The paranoic group is the only one that had a marked decrease.

The trend in the arteriosclerotic group has been upward from 1912 to the present time. During the same period the senile group has remained at practically the same level. The influence of the annual gains in the arteriosclerotic group on the growth of hospital population is seen by the fact that there were 812 more arteriosclerotic first admissions to the civil State hospitals in 1927 than in 1912. The only other group that has had as large an absolute increase in first admissions in the same period is dementia præcox.

The trend in the rate of first admissions with general paralysis has been slightly downward since 1918. Nevertheless these cases are coming into the State hospitals faster than they are going out. The introduction of new methods of treatment has resulted in reducing the death rate in this group, in prolonging the hospital life of the patients, and in restoring of many of them to the community.

In this connection it seems unfortunate that more determined measures are not taken to eradicate syphilis. The 800 paretics that enter our hospitals represent only a fraction of the large number of syphilitics that are needlessly sacrificed each year.

TABLE 4. INCREASE IN PATIENTS CLASSIFIED BY PSYCHOSES, CIVIL STATE HOSPITALS, YEAR, ENDED JUNE 30, 1927

Psychoses	Increase in patients on books			Increase in first admissions		
	Males	Females	Total	Males	Females	Total
Traumatic	16	7	23	3	4	7
Senile	33	38	71	— 2	19	17
With cerebral arteriosclerosis....	164	102	266	82	30	112
General paralysis	93	28	121	— 6	17	11
With cerebral syphilis	7	19	26	— 3	1	— 2
With Huntington's chorea	— 1	— 5	— 6	..	— 6	— 6
With brain tumor	1	6	7	1	5	6
With other brain or nervous dis..	29	8	37	10	2	12
Alcoholic	115	11	126	107	25	132
Due to drugs & other exog. toxins	8	2	10	8	7	15
With pellagra .....	..	..	..	1	— 1	..
With other somatic diseases.....	— 4	..	— 4	— 8	2	— 6
Manic-depressive	106	223	329	4	71	75
Involution melancholia.....	22	18	40	3	14	17
Dementia præcox	458	447	905	152	51	203
Paranoia or paranoic conditions..	— 11	— 107	— 118	— 1	— 7	— 8
Epileptic psychoses	36	— 13	23	34	— 5	29
Psychoneuroses and neuroses	9	12	21	— 2	9	7
With psychopathic personality...	3	19	22	12	11	23
With mental deficiency	— 7	— 1	— 8	— 4	— 5	— 9
Undiagnosed psychoses	5	— 11	— 6	— 1	— 7	— 8
Without psychosis.....	7	— 1	6	8	— 2	6
Total	1,089	802	1,891	398	235	633

The trend in the alcoholic group of first admissions rose again in 1927. There was a marked reduction of cases in this group from 1917 to 1920 but since 1920 the group has been gradually increasing and is once more a factor of large importance. As would be expected, the alcoholic cases are admitted principally from the large

cities. Of the 554 alcoholic admissions of 1927, 166 came to the Manhattan State Hospital, 96 to the Central Islip State Hospital, 63 to the Brooklyn State Hospital and 32 to the Kings Park State Hospital. Buffalo State Hospital received 38 cases and Utica State Hospital 31 cases. The other 8 State hospitals together received 128 cases.

The trend in the rate of the manic-depressive group increased from 1909 to 1919 but since 1919 it has slightly declined although the rate in 1922 was the largest of which we have record. There is a steady accumulation of patients with this psychosis in our State hospitals notwithstanding the fact that the rate of first admissions is not increasing.

The same is true of the dementia præcox group. There was an increase in this group of 905 patients on the books during the last fiscal year. The total dementia præcox patients on the books of the hospitals on June 30, 1927, was 27,107, or 58.5 per cent of the entire State hospital population. Owing to the large number of new cases and the chronic nature of this disorder it constitutes our largest institution problem.

The reduction of 118 in the paranoic group during the past year is surprising in view of the large increases in the other groups.

The increase in the traumatic group although not large is an indication of more serious additions in the future as our automobile traffic continues to increase.

As we have previously mentioned there was an increase of 405 in patients on parole during the last fiscal year. Such increase was well distributed in the various clinical groups; there being a gain of 79 in the arteriosclerotic group, 52 in the general paralysis group, 54 in the alcoholic group, 116 in the manic-depressive group and 118 in the dementia præcox group. The only large groups in which the paroles declined were the somatic disease group, the paranoic group and the group of psychoses with mental deficiency.

4. *Are like increases in mental patients occurring in other states?* Last November, Commissioner Parsons wrote to supervisory boards in other states asking whether the increase of patients with mental disease had been unusually large during the preceding year. Replies were received from several populous states none of which reported an abnormal increase of patients during 1927.

Illinois had a large increase of patients in 1924 and 1925 but a comparatively small increase in 1927. Massachusetts reported about the average increase during the past year. The Ohio Department of Public Welfare stated that the increase in patients in that State during the past ten years had been only 1,511. The State of Washington sent us data for the biennial period of 1925-1926 which showed an increase of only 62 admissions during the two years.

In the QUARTERLY for October, 1927, I summarized the results of the census of patients in State hospitals for mental disease taken by the Federal Census Bureau as of January 1, 1927. Complete returns were shown for 30 states. An increase in resident patients occurred between 1923 and 1927 in all of these states except Oregon and an increase in the rate of patients per 100,000 of population was found in all of the states except Ohio, Michigan, Oregon and California. The rate of resident patients in State hospitals per 100,000 of population in the 30 states taken together increased from 218.5 in 1923 to 226.9 in 1927. The increase from 1910 to 1923 in both public and private hospitals for mental disease in the country as a whole had been from 204.2 to 245 per 100,000 of population. Apparently the relative rate of increase of patients has not been accelerated in recent years.

5. *What increases in mental patients may be expected in this State during the next ten years?* It is evident that the immediate outlook is rather gloomy. The net increase of 399 patients in January, 1928, was greater than that of any other month in recent years. Personally, I do not think this rapid rate of increase will continue. But I do think we can reasonably look forward to an increase of approximately 12,000 patients during the next ten years. This estimate is based on the rate of increase of the last decade.

Preventive measures, no doubt, are gaining ground; but I think few people realize how difficult a matter the prevention of mental disease really is. It involves a long period of research and education in a field in which there is now a deplorable lack of understanding and agreement among scientists. It involves changes in family life, changes in social habits and customs, changes in educational systems, and changes in industrial and commercial life. Our present methods of living were established in a pre-mental-hygiene age. No thought of mental hygiene entered into their making. Per-

haps some mental hygiene may be grafted on these established customs and habits. This is now being tried in a half-hearted way. But gradually, I believe, as the new science of mental hygiene develops, there will come into being new systems of human relationships, new habits, new customs, new standards and ideals that together will produce a race much healthier mentally than we are today. This will take much time as well as much thought and much patience.

In the meantime it behooves us to expedite our building program and thus be equipped to receive the many thousand mental patients that will need care before the mental hygiene millenium arrives.

BOOK REVIEWS

Population Problems in the United States and Canada. Edited by LOUIS I. DUBLIN, Ph. D., statistician, Metropolitan Life Insurance Company; 318 pages. Houghton Mifflin Company, Boston and New York.

The American Statistical Association, under the stimulus of its president, Dr. Dublin, gave special consideration to population problems at its annual meeting in December, 1924. The present volume is an outgrowth of the papers presented at such meeting. The opening chapter, written by Dr. Dublin himself, sets forth various phases of the population problem and outlines the scope and purpose of the book. He points out that the problem has two main aspects, the one quantitative and the other qualitative. The first includes the facts concerning the population with reference to composition and movement and involves the question of future growth and the consideration of various factors relating thereto such as agricultural and mineral resources. The qualitative aspect deals with racial characteristics of the population, contributions of the various stocks, and policies in regard to shaping the future composition of the population. Other factors not classifiable under either of these two heads relate to standards of living, labor problems, the efficient management of resources and similar problems. The book also presents ideals that should control in determining our population problems and sets forth a program which, if followed, would bring us nearer to the desired goal.

The editor discusses the decline of the birthrate which seems to be most marked in the upper strata of society. His attitude toward the problem is well summed up in the following words: "The editor expresses his faith in the common people and their potentialities. * * * We see on all sides clear evidence of the ability of ordinary people to give birth to children capable of the highest achievement as opportunity and environment releases their power." He further states that "There has always been a differential birthrate and a replacement of one group of people above by another, equally good, from below. In all ages, men have raised themselves above their inherited station in life and have occupied the seats of the mighty, left vacant by those considered their superiors, who have neglected or have been capable of performing their highest obligation to society, namely, parenthood. In all fairness, we must critically examine the current point of view and shift the emphasis in our population discussion from a glorification of the upper strata to a more generous recognition of the inherent worth of the great mass of mankind."

The second part of the book contains articles on Population Growth in the United States, Natural Increase of Population and Urbanization of Population. The first of the three papers, which was written by Professor Reuter of the University of Iowa, reviews the increase of the white and negro population of the country as shown by the Federal censuses from 1790 to 1920. He finds that during the nineteenth century the native negro stock in the United States increased 663.3 per cent while the native white stock increased 693.3 per cent. After reviewing the various factors relating to the increase of population he reaches the conclusion that prediction relating to population increase even in the immediate future is an extra hazardous type of speculation.

In discussing the natural increase of population Professor Warren S. Thompson expresses the opinion that the rate of natural increase in this country is probably as great as can be well taken care of under the economic conditions now existing, and it seems doubtful whether we can support such a rate of increase for many decades. There are indications, however, that our annual increase is on the decline so that it probably will not outrun the possibility of maintaining or improving conditions of living for half or three-quarters of a century, provided immigration is not too great. He further holds that much of the improvement in living conditions has been achieved at the expense of the size of the family. With respect to the differential birthrate he agrees with Dr. Dublin that the dying out of certain upper and middle class groups in our population is not a very serious matter. He makes a plea for earnest study of our present urban industrial civilization to determine whether family life can be given a proper place in it. In closing his valuable paper he uses these words "The history of civilization shows us that man is the product of rural conditions of life. Like Antaeus, he seems to retain virility only when he is in contact with Mother Earth. Can we change his nature? Or can we more easily adapt our civilization to give man his needs? Here is a problem which should challenge man's best efforts."

Part III, which deals with population and natural resources contains papers on "The Optimum Size of Population", "Population and Agriculture" and "Mineral Resources for Future Populations". The writers of these papers look forward with apprehension to a time when the population will outrun the food supply, the coal and oil resources will be exhausted and the supply of lumber, paper and fibers will be entirely inadequate to supply the needs of the people. Reference is made to the possibility of finding substitutes but no adequate sources of new energy supply can be predicted from present knowledge.

Part IV, which deals with population and immigration, contains an interesting discussion by Ales Hrdlicka upon the development of the American type of man. He holds that the white people of America have approached the formation of such a type which he describes as follows: "This type is a good one. It is characterized by tall stature, being the tallest of all the larger groups of white people; by, on the average, a medium pigmentation of the hair, with scarcity of adult blonds and near-absence of blacks; by prevalently mixed eyes, or light ones showing more or less of a brown admixture; by an inclination, especially in youth, to sinewy slenderness; and by other features. The main characteristics of its behavior are, in general, frankness, openness yet shrewdness, energy and persistence, with, in general, but little sentimentality or affectation, and relatively few extremes except perhaps in industrial, financial, and occasionally in religious endeavors."

Another paper of merit in this part of the book deals with "Immigration and National Life" and is written by Alexander Goldenweiser. After setting forth the contributions made by various immigration peoples to American life, the author makes the following significant statement: "Current Americanization theory is based on a belief in the desirability of cultural uniformity. This belief is not warranted by history. Cultural diversity, the coming together of different outlooks and traditions, the juxtaposition of different standards, have always fostered greater objectivity, a liberal attitude toward men and things, a toleration of standards and habits other than our own, and greater cultural vitality and creativeness."

In the section which deals with the outlook for the future, Professor Samuel J. Holmes discusses the effect of the health movement on the welfare of the population. He raises many interesting questions relative to the selective effect of various diseases but does not answer them.

The book as a whole is a remarkable symposium on a subject of first importance and should be read by all students of society and by all who have a part in shaping our governmental policies with respect to health work, immigration, labor and domestic relations.

POLLOCK.

Introduction to Social Statistics. By CLARENCE G. DITTMER, Ph. D.; 167 pages, illustrated. A. W. Shaw Company, Chicago and New York.

The key to this work may be found in the preface, where the *author* states that his readers are expected to be "sociology students * * * few of whom will ever become professional statisticians, but that all of them will have to deal with statistical studies and present their findings in an intelligible manner. He has in mind also the army of social workers who are

expected to deal with facts rather than fancies." Most data used by statisticians are in all probability gathered in the field by just such individuals. Consequently it is well that they be versed in the procedure of fact gathering and systematic arrangement.

The greater part of the book is devoted to this purpose. There are chapters on the art of the statistical schedule and the subsequent tabulation of data drawn from the schedule. This is followed by a lengthy chapter on graphic presentation. There is a great deal of illustrative matter in the latter chapter, some of it good, more of it poor. The author's reason for the selection is that he desires his students to exercise critical judgment upon them. It is questionable, however, whether the elementary type of student for whom the book is intended is in a position to analyze and recognize those psychiatric principles which enhance the value of one type of graph and detract from the others.

The defect of the book lies in its refusal to attribute to sociology students more than a modicum of mathematical knowledge. Most of the users of this book we are told will have long since forgotten their algebra and most of them would be completely stumped by a problem involving the extraction of square root. To the reviewer this appears to be a severe indictment of the student rather than a justification of oversimplification of text. It seems on the contrary that the principles found in the average college textbook on statistics should be well within the grasp of every person, who has had, at any rate, the elementary courses in algebra required even in the high school.

The chapter on correlation is disappointing in that the student is shown how to find the coefficient of correlation from a paired series, but is left in the dark with respect to the treatment of the correlation table, which is the more usual arrangement. Again there is no reason why the long established term "coefficient of variation" should be abandoned for the coefficient of standard deviation, especially in view of the fact that the former is the recognized expression for the well-known measure of dispersion.

On the whole, it may be said that had the author kept in mind a higher type of student, the result would probably have been a more adequate text. At present the reader will profit most by the discussion of the presentation rather than the analyses of statistical data.

BENJAMIN MALZBERG.

The Prohibition Mania. By CLARENCE DARROW and VICTOR S. YANOS. 254 pages. Boni and Liveright, New York, 1927.

This very unsatisfactory book was written to refute the arguments set forth in Irving Fisher's book, "Prohibition at Its Worst." In preparing

their arguments the authors evidently did not deem it worth while to make a careful inquiry into the effects of the liquor traffic at any time, or into the effects of prohibition on the liquor traffic or on social welfare. The book presents practically nothing new and very little that has not been better stated elsewhere. It consists principally of unverified opinions, statements, and quotations of doubtful value. To one who seeks definite data on which to base conclusions, it is disappointing to find unsupported statements such as the following: "The great majority of civilized, educated and cultivated people, use liquor today." "The great majority of the men of science drink intoxicating beverages in moderation * * *". "The same is true of the overwhelming majority of professional and business men". "The opponents of prohibition are not obscurantists or standpatters. On the contrary they are among the most progressive elements of the population, who encourage and promote science and culture in every way, and if science should ever arrive at the definite conclusion that alcohol in any quantity is physically or morally and socially seriously injurious, they will be among the first to urge individuals to abstain from the use of alcohol". "There never were statistics of any value showing the relation between crime and intoxicating liquors. There is no appreciable relation and there never has been."

These few quotations give a sample of the author's style and method of argument. There is throughout sharp criticism of Professor Fisher's deductions but little constructive discussion.

Those who think that a great social question can be solved by a lawyer sitting at his desk and writing denunciatory statements concerning everything that interferes with his personal desires will naturally want to read this book; on the other hand, those who desire accurate information relating to the great problem of the control of the liquor traffic will have to look elsewhere.

POLLOCK.

The Suicide Problem in the United States. By ADOLPH DOMINIC FRENAY, O. P., Ph. D. Richard G. Badger, The Gorham Press Boston, 1927.

This is essentially a statistical study of suicide; there is but slight attempt at a psychological and sociological analysis. The result therefore is a contribution, primarily, to demography. In this the author adheres closely to the orthodox approach. The introductory chapter describes the field and the method of analysis. This is followed by a discussion of suicide, and its incidence, compared with other causes of death. The course of the suicide toll is then followed over varying periods of time, not only for the United States, and many of its cities, but for most of the European nations, and a

scattering of others, as Japan, Australia and Mexico. The rates in the United States are then further analyzed by race, degree of urbanization, age, sex, marital status, occupation, and by method of committing suicide. The concluding chapters take up, with some detail, the relation of suicide to the weather, to the nationalistic make-up of the population, and finally to religion.

The results are not novel. The outstanding findings are as follows: As a cause of death, suicide in 1922 ranked 16th on the abridged list of causes of death, with a rate of 11.9 per 100,000 population. It was exceeded by diseases such as heart disease, tuberculosis of the respiratory system, cancer and pneumonia. As compared with the middle of the past century, the suicide rate appears to have increased, but recently has shown a declining trend. There seems to be a tendency for suicides to decrease during war, but to increase after war. The United States occupy a mid-position compared with European nations. Among the latter, the high rates are found in central, western, and northern Europe, the low ones in the east and south. In the United States the northeastern and central states have moderate rates, the southern states low rates, and the western states high rates. The curves for city and country show similar trends, that is, as one increases, the other increases—though the urban rate exceeds the rural rate. The rate for the colored population is lower than that for the white; the male rate exceeds the female rate at every age except the period from 15-19; single people show higher rates than married people. Years of commercial panics and depressions do not show constant relations to the suicide rate. As to means of suicide, firearms appear most frequently; suicide by hanging occupies second place. The correlation between climate and suicide is not significant. The most significant relation appears to be that with religion, Catholics showing consistently lower rates.

As a study pursued by statistical methods, the book merits criticism. The text shows an almost complete absence of tabulation. Historical data, instead of being summarized in table and chart, are described at length from year to year. Two difficulties result from such treatment. In the first place, the reader must experience trouble in following such data, as no long term trends are isolated, and secondly, slight annual changes, which in themselves may be of no significance, are overemphasized. Closely associated with this is the failure to recognize the possible influence of secular trend on correlations. For example, the suicide rate in 95 cities is correlated with that for the United States registration area over a period of 21 years, and a correlation coefficient of $+0.98$ is obtained. This is treated as though it were a coefficient of zero order. In reality, each of the two sets of rates was correlated with time. Consequently their true correlation would be one in

which the correlation with time was held constant by the method of partial correlation. The same result might be obtained by correlating the two series, after each had been corrected for secular trend. Many of the correlations quoted in the text suffer from this methodological oversight.

A section is devoted to the discussion of suicide rates among Indians; this part of the text is really ethnographical instead of demographical. On page 153 we find the following statement: "The Greeks kill themselves after the slightest disappointment." The authority for this statement is given as *Lambroso, L'homo de linguente*, p. 51, 1884. This is an example of numerous printer's errors in the text; the proper title is *Lombroso, L'uomo delinquente*. Lombroso was not the original authority for the statement; it is questionable therefore, whether such evidence, twice removed from the original observer, ought to be accepted without corroboration. Should an isolated sentence be taken as characteristic of a group? If so, our contemporary anthropologists will have written in vain, for if they teach one principle of research it is that a problem of ethnography should be analyzed not by means of scattered observations taken on heterogeneous groups, but by a thorough study of one single, homogeneous people.

The last word has not been said on the problem of suicide. John Rice Miner showed how the method of partial and multiple correlation may be used in the solution of many of the purely statistical aspects. Durkheim tried to prove that causation must be sought for, not in individual idiosyncracies, but in "a collective tendency of society."¹ Such an interpretation takes us far from the point of view of individual psychology and psychiatry; but it shows us that further research on suicide which is to depart from a purely descriptive attitude, and attempt to seek out causative factors, will need to weigh once more the relative effects on behavior of the individual constitution and of society.

1. See, *Le Suicide*, Book III, Chapters I and II.

BENJAMIN MALZBERG.

Outlines of Nursing History. From the Earliest Days to the Present Time. New Fourth Edition by MINNIE GOODNOW, R. N., Directress of Nurses, Hospital of the Graduate School of Medicine, University of Pennsylvania. Reset; 12mo. of 472 pages with 139 illustrations. Philadelphia and London. W. B. Saunders Company, 1928. Cloth, \$3.00 net.

The purpose of this book is to give a history of nursing from the earliest times up to the present. The author has arranged her subject matter, for the most part, chronologically, the steady advance made in the field of nursing being therefore clearly demonstrated, and it is interesting to note the prominent part that has always been taken by religious organizations in

this humanitarian work. With each succeeding chapter one learns of additional obstacles that were overcome, and admiration for the energetic and courageous pioneers, steadily increases. Not the least of their early difficulties was the definite antagonism and opposition of the members of the medical profession, an antagonism which has long since disappeared.

Two chapters are devoted to the life and work of Florence Nightingale. Due credit is given her for the truly wonderful results obtained through her tireless devotion to the cause of nursing, which, largely through her efforts and inspiration has been raised from a discredited occupation to the dignity of a profession.

The development of nursing in various states and countries is given briefly and the establishment of nursing organizations is outlined. The organizing of training schools for nurses in foreign countries, as well as in America, is covered in a comprehensive and instructive manner, as is also the later developments in nursing, such as those referable to public health and schools.

Nursing in the World War comprises one chapter and makes interesting and instructive reading. The last chapter gives a list of nurses' organizations in countries throughout the world and also a list of the magazines devoted to this work. A total of 139 illustrations, many of which are new, add greatly to the appeal of the book, and there is also a very complete index. The type is clear and the paper excellent.

This is the fourth edition of Miss Goodnow's book, and this revised, enlarged and up-to-date volume will unquestionably be a welcome addition to the libraries of schools of nursing and will maintain the high standard as a text-book established by the previous editions.

PRITCHARD.

The Human Body. By LOGAN CLENDENING, M. D., 400 pages, illustrated. Alfred A. Knopf, New York and London.

Into this well-bound and well-printed volume of 400 pages, Professor Clendening of the University of Kansas, has packed a carefully prepared résumé of verifiable medical knowledge, a sprinkling of flippancy and a very considerable quantity of common sense and medical philosophy. The work was prepared, not exactly to fill a long felt want, but rather, the author declares, "to make intelligible some of the intricacies of the human body for the adult and otherwise sophisticated reader."

In an early chapter, Huxley's comparison of the experiences of life with a game of chess is quoted:

"The player on the other side is hidden from us. We know that his play is always fair, just, and patient. But also we know to our

cost that he never overlooks a mistake, or makes the smallest allowance for ignorance. To the man who plays well, the highest stakes are paid with that sort of overflowing generosity with which the strong show delight in strength. And one who plays ill is checkmated—without haste but without remorse."

Dr. Clendening revels in satirical references to his medical forebears; but does ample justice to genuine pioneers and to their path-blazing accomplishments. A copious and very elastic style is at its best in denunciation of quackery, of the medical fads and follies of Main Street and of the violent and vitriolic methods followed in the perpetual warfare against tobacco and alcohol as deterrents to good health.

Dr. Clendening discusses longevity in entertaining fashion, summarizing the widely disparate views of ancient and modern authorities in a few satirical observations.

Barring accidents, the life of any individual, the doctor asserts, is determined at the moment he starts off, but, if he is hit by a Ford or a pneumococcus, acquires syphilis, or swallows carbolic acid, his chances are thus lessened. "Nothing a man does to himself after he is born makes more than a few hours difference at the most. Fresh air and exercise make one feel better, but such famous advocates of physical hygiene as Theodore Roosevelt and Walter Camp died in their early sixties."

Professor Clendening minimizes the influence of alcohol or tobacco in shortening the span of life and presents this experience observed in his own practice:

"Some years ago a friend of mine was greatly annoyed because his father-in-law at the age of eighty-three persisted in a lifelong habit of getting drunk; in fact, since he gave up active business, the old gentleman seemed to indulge more freely than before. On one or two occasions I rendered some service and became attached to the aged offender, a bright-eyed, quick, amusing old liar, who claimed to have witnessed personally every historical event from 1842 to the present date. He often told me of his younger brother, aged seventy-six, who lived in California, stating that this brother had lived a better life, having taken the pledge of total abstinence at the age of twenty-five. At last it was announced that the younger brother was arriving to pay him a visit and they came to see me at my office. They stood side by side and I turned my gaze from my erring friend, aged, remember, eighty-three, with his alert bearing, his beady, birdlike eyes, and his quick movements, to the brother, only seventy-six, who wore proudly on his somewhat spotted lapel the blue ribbon of the pledge. The total abstainer was a total physical wreck. His hands shook with a palsy, a film of cataract covered his eyes, and his hearing was almost gone, but as he was led, bowed and drooling, to his chair, he murmured to me that he ascribed his advanced age to his good habits in regard to the use of alcohol."

Dr. Clendening desires it to be understood, however, that he is not convinced that alcohol does no injury to the body. He says, "certain definite diseases—cirrhosis of the liver and a form of neuritis or degeneration of the nerves—have been associated with it. They are, however, rather rare diseases and, in fact, usually met with only in large public hospitals. * * * Of a form of mania, delirium tremens, and death in it there is no doubt whatever that alcohol is the cause. * * * I am not trying to furnish any material for propaganda in either direction. If a man resolves to abstain from alcohol, and even if he is passionate in his belief that that is the best thing for him and his labor, I am prepared to applaud him and avoid him. If, on the contrary, a man determines to go out on a spree and returns home and murders some woman with an intelligence quotient of 15, that also is a matter of utter indifference to me. Even if a person swallows a jug of synthetic gin and runs me down with his Ford, that too is a part of life, and I must learn to be spry and take care of myself on the streets."

The chapters on the digestive system, the respiratory system and the circulatory system, on nutrition, on the vegetative nervous system and the ductless glands, are presented in most interesting style and are sure to hold the attention of the reader. Of special interest are the chapters on the nervous system and the relation of mind to body.

The history and etiology of infectious diseases are dwelt upon in some detail and these chapters are as humorously sound as any contained in the volume.

In general, it may safely be said that Dr. Clendening has here presented a work of genuine value on the history, the causation and the cure of our physical and mental disorders. Even the last chapter of all, on De Senectute and Death, is not entirely devoid of interest and value. The final sentence is quoted here in full:

"You may be perfectly sure that if you live long enough, you will grow old, and that when you grow old, you will be unbeautiful and unattractive, and that surely death will come. When it comes, you may be certain you will disappear like all the rest and that you will not be missed, nearly as much as in your sanguine moments you have been inclined to suppose."

The work is copiously and artistically illustrated and a generous glossary and index have been provided.

Assuming that Professor Clendening maintains in his classroom the high spirits which are everywhere apparent in this volume, one can only envy students lucky enough to sit at the feet of this medical Gamaliel.

T. E. M.

Woman and Love. By BERNHARD A. BAUER, M. D., Gynaecologist, Vienna. In two volumes. Translated from the German, Vol. I, by Eden and Cedar Paul, and Vol II, by E. S. Jerdan and Norman Haire. Boni and Liveright, New York, 1927.

These volumes combined contain about 750 pages. They are written by a gynecologist of large practice and are the results of a lifetime's experience. They have the unusual merit of being highly scientific and at the same time of fine literary character. The author's style is both masterful and brilliant to an admirable degree.

Volume I may be characterized as the psychology and philosophy of love in its many modifications. It portrays the variations of the love drama in its universal phenomena growing out of the sex duality throughout the greater part of nature, culminating particularly in the love life of woman. Perhaps no better idea can be given of the contents of the volume than to recite the topics discussed, which are: Evolution of the concept of love; primary sexual love; love in grown women; platonic love in women; sexual love and its motives; fetic and love; love and pleasure; love and pain; love aberrations; love and crime; free love; love, religion and poesy.

Volume II is a fundamental treatise on the anatomy, physiology, psychology and sexual life of woman with an appendix on prostitution. From the standpoint of the medical profession this volume is of the greater interest and importance. It is replete with historical, scientific, and even philosophical consideration. The author traces the physical life, particularly the sexual, of the woman from the beginning of life through all its stages, normal and abnormal, to death. He draws a glorified picture of motherhood that leaves fond memories and makes tender the heart. The work is the best readable presentation of this deep theme of life that has happened to come under the notice of the reviewer.

The psychology of woman is a penetrating analysis which shows great acumen and understanding of woman's nature. It is a superior treatment. The sexual life of woman is traced in all its phases, normal and abnormal, throughout the periods of life. The erotic life of woman is minutely shown from the viewpoint of all the senses, with the practices of deliberate eroticism as manifested in pornography and eroticism among uncivilized peoples.

As Euripides observed, love is the sweetest thing in the world, and the bitterest. The striving of life and procreation reveals almost unbelievable marvels; its tragedy is well illustrated in the case of the white-faced decticus and the praying mantis in which the female is much more powerful than the male and, after coitus, actually devours the male, presumably as a necessity for the maturing of the young. The influence of the gonads in the human being in determining the secondary sexual characters is well known. As

Steinach shows it is possible to feminize a male by castration and subsequent implantation of ovaries; and to masculinize a spayed female by the implantation of testicles. But even yet it is not fully known how these sexual glands, male and female, function. The meaning of love is sexual impulse elaborated by the brain as the organ of the mind. Our reason regulates the sexual impulse and is competent to intensify or repress it, but not the love itself. Platonic love does not exist. Balzac observes: "Anything can be expected of a woman in love." Accordingly we find every kind of love aberration possible.

Probably the most important section of the book to the readers of this *Journal* is that of "love and crime." The penalty of failure in the struggle of bodily life is death; the penalty of failure in spiritual life is depravity or crime. Women's criminal propensities take on peculiar characters of their own. Their vanity and love of adornment results in pecuniary criminal acts. Because of the power of their sex over men, they have almost a monopoly on blackmail. Their murderous assaults take the direction of poisoning. Their wounded pride seeks revenge by disfiguring their rival or seducer with vitriol.

Strangely enough it is not unfulfilled love nor disappointed love, but fulfilled love which is the indirect cause of woman's association in crime; she lies, commits abortion, and even infanticide to save herself from disgrace. "Woman, thy name is frailty." Woman is in a position of absolute dependence throughout her life; nature has made this inevitable. Woman never can become fully woman apart from her dependence on man. The author observes that as long as our laws do not grant to the mother of the illegitimate child an assured position in the world and allows the father of the same to evade responsibility by some trifling money payment, women will be forced on to the crime of abortion, which is unquestionably true.

From acknowledgment of the high merit of these volumes in general, we are compelled to dissent entirely from certain of the author's sociological speculations and theories. When he comes to an advocacy of "free love" his conclusions are scarcely understandable. It appears to be a case of "the cobbler getting away from his last." Dr. Bauer, in his special field, must be acknowledged as a master; in the field of philosophy, sociological and causal, his ideas seem immature. There is not a convincing word in his discussion of free love.

Women's lives are restricted by all kinds of limitations which do not exist for men. These limitations would long since have disappeared relative to women, were it not for the physical outcome of the love relationship, pregnancy and childbirth. The thought of these two things influences the whole life of a woman, imposes all sorts of reserves upon her loves, and makes her strive with utmost energy to resist the natural dictates of their sensibilities.

It is the thought of these consequences which makes woman so hostile to the idea of free love. And rightly so. It is also for this same reason that lapses in virtue on the part of woman are far more condemned than incontinency in men. The ideal is the same standard for both. But because the results of sexual gratification on the part of woman is quite other than that of men, and because women by nature must be the bearers of the race, civilized mankind always has and always will, irrespective of protest on the part of women or men, glorified virtue in women and unreservedly condemned any falling therefrom. Anything less is obnoxious to every sentiment for the welfare of the race. Adultery in general is a crime against the race, but how much graver it is in the case of woman!

The author argues that free love associations, because based on true elective affinity, are usually more durable and more intimately loving than most legal marriages. The cases of Goethe and Christiana Vulpius and of Mr. Lewes and George Elliot are cases in point. This durability results not so much on freedom of love as on the possibility of separation without difficulty. On the other hand, he holds, the woman forfeits all rights to a free life by marriage. He pictures the married woman as in a slavery. In the unhappy marriage she slowly dies of a broken heart. The woman endures so much not to rob her child of home and father. Has the State a right to drive a woman to endure such spiritual suicide for the sake of a child?

Contrarily, he dares assert, nothing of this kind happens in free unions, even when there have been offspring. He implies that love cannot or does not exist in marriage as it does in free love. All of which is totally false assumption. The bitter disappointment of being abandoned by the lover, the disgrace of unmarried motherhood, the woman believes herself to be shielded from by a marriage sanctioned by the State or society. And well she does. Ages of human history has demonstrated that fidelity wears better with something of legal support. The notion that freedom of separation plays any such part as he supposes, in face of the present facility of divorce, is ridiculous. Suppose we have free divorce, what then? Will the wife, who has children, any the more readily leave her husband? Where will she go? To whom shall she look for support? Unhappy marriage is certainly a great evil to the individual, but free separation might be a still greater evil to society.

Underlying every sexual custom and every sexual taboo there is originally some good reason. Apart from sentiments of love and respect, there is more truth than elegance in the statement of a gentleman at a discussion on marriage: "After all the whole question of marriage boils down to who is going to pay for the kids." Marriage is society's mechanism of defense. With the frailty and capriciousness of humanity, free associations can never meet with approval of society. The possibility of separation being easy, it

will become actual at the first difference or aggravating disagreement. What then is to become of the children of such association? Both they and the mother, under normal economic conditions, would become a burden on the State. The average man finds it difficult enough to maintain his own family without being taxed and burdened to care for the irresponsible "free associated and freely separated." In a single word, we believe, free love associations, if such thing were possible, would mean an immediate return of civilization to abject barbarism. Present laws may not be all they should be; the father of an illegitimate child should be compelled by society to support the mother and child the rest of his days, and not to escape responsibility, and, perhaps more often than otherwise, shift the burden to society in the form of public orphanages. Marriage is a failure only when the persons married are failures. Free love does not free us from any of these human delinquencies. Marriage is more often reasonably happy than otherwise; it is more often a reasonable success than a failure. Marriage is an evolution among the customs of society for mutual protection and normal regulation, and it is probable that marriage has done more for the civilizing and humanizing of mankind than all other customs or institutions combined. The home is the fundamental institution of society. We may better lay the axe at the root of any other tree.

The author's philosophy of causation is a maudlin sentiment without a scintilla of evidence in earth or heaven. He rests in the Indian doctrine of Karma and fate. Reincarnation takes place in coition. Karma is the superhuman force that brings man and woman together; by the path of reincarnation, the immortal soul has awakened to new life. Hence in crime, it is not we ourselves who are mainly responsible for aberrations from the right path, but the transcendental forces, Karma and fate, are the powers competent to lead us as puppets into the paths of crime. On this assumption there can be no moral wrong; ethics and the moral life are annihilated, responsibility has no existence. No more pernicious doctrine could even be fancied by the wholly insane. —But we forego. Apart from Dr. Bauer's absurd philosophy, he has written two wonderful works for which the remarkable sales in Europe testify full appreciation.

GEORGE S. PAINTER,
New York State College.

Clinical Studies for Nurses. By CHARLOTTE A. AIKENS, R. N. New Sixth Edition. 12mo. of 605 pages, illustrated. W. B. Saunders Company, Philadelphia.

The Sixth Edition of Miss Aikens' book presents a study in diseases and medical nursing, obstetrics, gynecology, diseases of children, surgical nurs-

ing, physical therapeutics, massage and nursing in nervous and mental diseases, to be pursued by the student nurse during the second and third years of training. It is essentially a teaching book which aims to present the subject-matter in a concise though simple manner. The chapter dealing with massage is well illustrated and should be of value in teaching. The chapter devoted to the nursing of mental diseases is quite elementary and has not been sufficiently modernized, a criticism which also applies to other portions of the book. The last section gives a series of questions covering every chapter. There are also appendices of hospital and invalid dietaries, surgical and miscellaneous notes. This volume would be of much greater value as a text book were it not so condensed. Each chapter, however, contains practical suggestions and the reviewer believes that additional information by the student nurse should be sought by reading the larger reference works on any subject of especial interest to her.

WORTHING.

The Psychology of Murder. By ANDREAS BJERRE, LL. D. Translated from the Swedish by E. Classen, Ph. D. Longmans, Green and Co., New York, London, 1927.

These essays are a study in criminal psychology, the first of a series of contributions to the psychology of murder. They are based on investigations conducted in the Central Prison at Langholmen, Stockholm, where the author was afforded opportunity for exhaustive conversation with a large number of criminals. In this book he has selected for examination three entirely disparate individuals, and has penetrated into the depths and shadows of their lives unknown even to themselves.

The author has approached the problem from an entirely new point of view. He has not contented himself with wide generalizations, or with the treatment of second-hand material as criminal statistics, reports of trials, hospitals and prison journals or other superficial data. He has devoted many years of his life to first-hand study of Swedish prisons in order by constant personal association with criminals to solve the riddle hidden away in the dark places of their psychic lives. The first fruit of these studies was published in 1907 in a treatise on the psychology of theft.

In his introduction the author elaborates the methods he has pursued. He was not content to investigate and describe the psychic life of isolated criminals, but to systematize criminals into certain groups according to essential common characteristics. Among murderers he finds that every single crime appears to have developed from such completely distinct and peculiar psychological conditions that for the present it is impossible to classify such criminals in groups on the basis of common characteristics.

He reaches the generalization, however, that the determining factor in all crime is *weakness*, a general unfitness or incapacity for satisfying the demands which life imposes upon one and all, irrespective of social environment and other external conditions. Weakness, or general unfitness, is the essence of all crime, is a thesis he states with reservations. Some crimes must be regarded as the result of positive psychological forces.

This general unfitness is found among murderers in various forms which, at bottom, are all means of escape from the realities of life, with which the socially unfit are unable to cope. The means of escape most frequently selected is *self-deception*, *world renunciation*, and *shamming*. He finds only extremes of happiness or suffering; we seek in vain for moderation in the criminal world.

The body of the work comprises the study of three individual murderers, each representing one of the types under which various individuals with general unfitness tend to fall. The personal visits to these criminals were the occasion not only for extended conferences or conversations with them, but also for observation of their bearing and actions, the slightest motion in given circumstances revealing a psychic motive otherwise unsuspected. The method and results of these researches are discussed under the headings: I. Self-Deception; II. Anguished Fear; III. Shamming.

The style of the author is lucid and graceful, and the translation seems to be excellent. The work should be of great interest to those investigating criminal psychology.

GEORGE S. PAINTER,
New York State College.

DR. PHILIP SMITH APPOINTED MEDICAL INSPECTOR

Dr. Philip Smith, deputy medical inspector for the Department of Mental Hygiene, was appointed medical inspector on March 1, 1928, and immediately assumed the duties of the position. He succeeds Dr. J. L. Van de Mark, who was appointed superintendent of the Rochester State Hospital on September 16, 1927.

Dr. Smith was born in Scranton, Pa., on November 18, 1872, and received his early education in the public schools of that city. He took his college preparatory work at the School of the Lackawanna and in the fall of 1892 entered Columbia College. He obtained his medical degree from the College of Physicians and Surgeons in New York City in 1900. Subsequently he served as interne on the staff of the Roosevelt Hospital and also on the lying in service of the New York Post-Graduate Hospital and the Floating Hospital for Children of St. John's Guild. On March 28, 1904, he became junior physician on the staff of the Manhattan State Hospital and passed through the various grades to that of senior assistant physician. He remained at this institution until his appointment as deputy medical inspector on September 1, 1923.

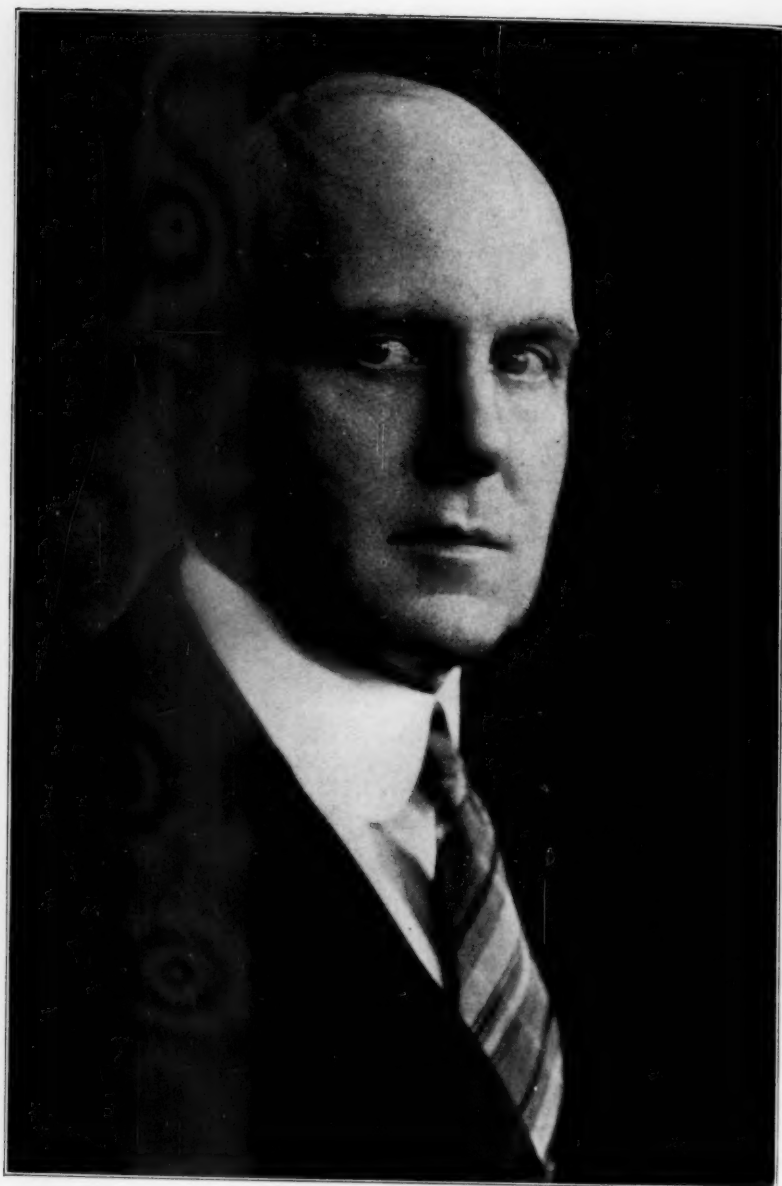
During the World War he was commissioned a captain in the Medical Corps and later was promoted to the grade of major and was chief of all services at the U. S. A. General Hospital, No. 4, Fort Porter, New York, until his honorable discharge from the service on October 31, 1919.

At the Panama Pacific International Exposition in 1915, Dr. Smith represented the New York State Hospital System from August until the close of the Exposition in December.

Dr. Smith is a member of the American Psychiatric Association, the New York Society of Clinical Psychiatry, the National Committee for Mental Hygiene and several local organizations. His successful experience of over four years as deputy medical inspector makes him especially well qualified for the responsibilities of his new position.



PHILIP SMITH, M. D.



DR. I. J. FURMAN

DR. FURMAN APPOINTED SUPERINTENDENT OF BUFFALO STATE HOSPITAL

Dr. I. J. Furman, first assistant physician of the Manhattan State Hospital, was appointed by Commissioner Parsons to the superintendency of the Buffalo State Hospital on March 1, 1928, and assumed the duties of the position on April 1.

Dr. Furman was born in Fairport, N. Y., in 1879. Following his grammar school education he completed his preliminary training in the Macedon Academy. After graduation from this school he took up teaching for three years and then entered Colgate University where he did pre-medical work. He then entered the Medical College of Syracuse University in 1902, graduating with the degree of M. D. in 1906.

He was engaged in the general practice of medicine in Shortsville, N. Y., from 1906 to 1912 when he entered the State hospital service as medical interne at Kings Park State Hospital. He advanced through the medical grades and in January, 1919, was transferred to the Manhattan State Hospital as senior assistant physician. On February 15, 1924, he was appointed first assistant physician at the Buffalo State Hospital, remaining there until June 10 of the same year when he was again transferred to the Manhattan State Hospital at which institution he held the position of first assistant physician up to his present appointment.

On July 1, 1923, Dr. Furman was appointed professor of psychopathology at Teachers' College, Columbia University, and in 1924 was also appointed associate professor of clinical psychiatry at the College of Physicians and Surgeons of the same university. He held both of these positions until it was necessary to resign because of his departure from New York City.

Dr. Furman is a member of the American Medical Association, the American Psychiatric Association, New York Society of Clinical Psychiatry, Ward's Island Psychiatric Society and the Alpha Omega Delta Fraternity. He has also been a member of the Masonic fraternity since 1910.

On December 1, 1906, Dr. Furman was married to Miss Celia Thayer of Fairport, N. Y.

DEATH OF DR. SANGER BROWN

Dr. Sanger Brown, psychiatrist and hospital executive, died at the Presbyterian Hospital, Chicago, April 1, 1928, at the advanced age of 76. Dr. Brown was born at Bloomfield, Ontario, February 16, 1852. He received his medical training at the Bellevue Hospital Medical College, graduating in 1880. Following graduation he became assistant physician in the Manhattan State Hospital, Ward's Island, New York City, and later served in the Danvers State Hospital of Massachusetts, and the Bloomingdale Hospital at White Plains, N. Y. In collaboration with Professor E. A. Schaefer at the University College of London, Dr. Brown conducted in 1886 and 1887 experiments on monkeys which afforded the first conclusive proof that in those animals the center for vision is in the occipital lobe. The report of these experiments was published in the transaction of the Royal Society of London in 1888. Dr. Brown also made an important study of "Hereditary Ataxia," which was published in *Brain* in 1892. Later Dr. Brown went to Illinois and became proprietor and medical director of the Kenilworth Sanitarium, a well-known private institution for mental disease. Dr. Brown was prominent in the American Psychiatric Association and was vice-president in the year 1920-1921. He declined election to the presidency in the following year on account of ill health. He served for several years as professor of medical jurisprudence and hygiene at Rush Medical College, Chicago, and for a time was association professor of medicine and clinical neurology in the medical school of the University of Illinois.

Dr. Brown was an uncle of Dr. Sanger Brown, II, assistant commissioner in the New York State Department of Mental Hygiene.

LEGISLATIVE MATTERS OF INTEREST TO THE DEPARTMENT OF MENTAL HYGIENE*

BY LEWIS M. FARRINGTON,
SECRETARY, DEPARTMENT OF MENTAL HYGIENE

The 1928 session of the Legislature had before it no outstanding legislation of major interest to the Department and institutions. The Department itself had very little special legislation to promote and that little involved only routine and minor matters.

The appropriations for maintenance appear to be adequate and substantial provision has been made for new construction. Funds are also being provided to complete payment for a site for a new State hospital, the purchase of which was authorized by the last Legislature. Commissioner Parsons has entered into a contract for the purchase of such a site located near Brentwood, L. I.

The session was noteworthy for the fact that but comparatively few bills were introduced which the Department actively opposed.

In view of the above explanation it seems to me it would be more advantageous to classify the legislation under the several heads and refer to each heading briefly.

RETIREMENT LAW

Several amendments to the Retirement Law were proposed. The only amendment of interest to the Department provides that persons in the State Hospital Retirement System may at any time during the present calendar year transfer to the State Employees' Retirement System on the same terms as those provided two years ago. This bill also provides for payment of annuities monthly instead of quarterly. The bill was approved by the Governor and became Chapter 571 of the Laws of 1928.

Another bill permits the transfer of an employee of a State hospital who is a member of the State Hospital System to one of the other institutions in the Department without sacrificing his membership in the State Hospital System. This bill was approved by the Governor and became Chapter 474 of the Laws of 1928.

A bill providing for retirement after 30 years' service in the State Employees' System was introduced but made no progress.

A bill amending the State Employees' Retirement Law provides that employees of State institutions reporting to the several departments must become members on completion of six months' service instead of immediately as provided by the old law. This was approved by the Governor and became Chapter 557, Laws of 1928.

* Presented at Quarterly Conference at Albany, March 20, 1928, and later amplified.

CIVIL SERVICE LAW

Another series of bills sought both by constitutional enactment and legislative enactment to provide civil service preference for World War veterans.

One amendment to the constitution, which passed both houses, provides that veterans and nurses disabled in any war shall have the same civil service preference as is now enjoyed by the Civil War veterans.

Another objectionable amendment to the Civil Service Law provided that only citizens may be given employment in State positions. This bill passed in a modified form and was vetoed by the Governor.

An objectionable bill relating to removal, discipline, etc., of employees in the competitive class was introduced but made no progress. It took authority for all discipline and removal from the appointing officer and placed it in a personnel board composed of one civil service commissioner, the Attorney-General or one of his deputies, or the district attorney, or corporation counsel and an employee in the competitive service of at least equal rank with the person against whom the complaint is made.

LABOR LAW

But one objectionable amendment to the Labor Law was introduced. That was our "old friend" providing for one day of rest in seven for all institutional employees and requiring the posting of a list of employees designated for duty on Sunday and filing of any changes in the list in advance with the Industrial Commission. The bill apparently had no chance of passage.

A bill extending the duration of a lien on public work from six months to one year was passed and was signed by the Governor.

MISCELLANEOUS BILLS

A bill introduced by the Committee on Reorganization amending the State Charities Law generally contains one item of minor interest in that it repeals Section 70 of the Charities Law which required a county having pupils in Syracuse State School to pay the institution \$20 annually for clothing for each pupil. The bill was signed by the Governor, becoming Chapter 859 of the Laws of 1928.

A department bill amending Section 19 of the Mental Hygiene Law relative to qualified examiners was signed by the Governor. This bill simply restored the old arrangement relative to the filing of certificates of appointment in the County Clerk's office. This bill became Chapter 238 of the Laws of 1928.

A bill was passed providing for change in location of the telephone trunk line system across the grounds of Letchworth Village, the change to be made without expense to the State. The bill was signed by the Governor, becoming Chapter 206, Laws of 1928.

The law of last year covering the transfer of part of the grounds of the

Buffalo State Hospital to the city was amended this year to provide for the demolishing of the Elmwood Building instead of its removal as provided in the original law. The city is to make available the sum of \$350,000 to provide for a new reception building and the Legislature is providing an additional item of \$100,000, making a total of \$450,000 available for the new reception building for the Buffalo State Hospital. This bill was signed by the Governor, becoming Chapter 257, Laws of 1928.

CLAIMS

While as usual a large number of claim bills were introduced in the Legislature, there were few of interest to the Department. One claimed damage on account of the sewage disposal system at Craig Colony. Another claimed damage because of alleged injury to a patient at Brooklyn. A third claimed damage resulting from the trespass of an inmate at Rome. The fourth authorized a claim on account of certain work at the Harlem Valley State Hospital, such claim involving however matters which arose prior to the transfer of that institution to the Department of Mental Hygiene. All these bills were vetoed by the Governor.

EXAMINATIONS, COMMITMENT, ETC.

A few bills were introduced modifying the present statutes regarding duties of committees of incompetent persons in minor particulars.

A bill amending the Civil Practice Act in relation to writs of habeas corpus provided that information shall be given as to whether any previous application or applications had been made and, if so, the determination made thereon and what new facts if any are shown in the new application that were not previously shown. A failure to comply with this requirement was made sufficient cause to deny the writ. The bill failed of passage in the Assembly.

A bill making the cost of committing insane Indians a State charge was passed, the Attorney-General having held that such cost under the existing law falls upon the locality, and this is somewhat of a hardship to the townships containing Indian reservations. This bill was approved by the Governor, becoming Chapter 475 of the Laws of 1928.

A bill amending Section 836 of the Code of Criminal Procedure,—an "old friend," making permissive instead of mandatory in New York City, the question of committing persons held under other than a civil process to Bellevue or Kings County Hospital for observation was again introduced but made no progress.

Another perennial bill provided for the assignment of counsel in all mental cases, prior to commitment. This bill made no progress.

There has been some interest in the matter of examination of alleged insane persons including those held on a criminal charge. The Committee on Reorganization introduced a bill amending the general municipal law authorizing any municipality to provide a suitable room for temporary detention, observation and care of alleged insane persons. The amendment simply substituted the Department of Mental Hygiene for the State Hospital Commission. This bill was approved, becoming Chapter 134 of the Laws of 1928.

A bill was introduced providing for a division of examination of certain persons accused of crime under an assistant commissioner in the Department of Mental Hygiene. The bill made no progress.

A bill giving the Board of Managers of the Buffalo City Hospital authority similar to that now exercised by the trustees of Bellevue, New York City, in regard to the care and detention of alleged insane persons pending examination and commitment was passed and was approved by the Governor, becoming Chapter 569 of the Laws of 1928.

A bill providing for the establishment of a Bureau of Psychiatric Instruction in the State Department of Education was introduced. The bill provided for the appointment of a chief who shall be a trained psychiatrist and he shall develop and supervise psychiatric service and instruction in the public school system of the State. This bill made no progress.

A bill permitting any psychopathic pavilion connected with a general hospital to detain a patient under observation longer than 30 days provided the approval of the Commissioner is obtained made no progress.

There has been considerable discussion in Greater New York particularly, with reference to mental examination of persons held on other than a civil process. While it seems quite evident that certain changes in the law would be highly desirable, there did not seem a likelihood of the matter being completed during this session. The question involves so many important legal points that further study would seem to be necessary. It is, however, conceded that the plea of insanity, the claim of insanity as a defense, etc., are susceptible of abuse and that earnest thought should be given to legislation to prevent such possible abuses.

Of special interest to those in the service was a bill providing for the sexual sterilization of insane, idiotic, imbecile, epileptic and feeble-minded inmates of institutions supported wholly or in part by public funds, and establishing a procedure therefor. While it was not expected the bill would pass this session, it represented an earnest effort on the part of those interested to provide legislation which the courts would likely hold constitutional.

The legislation was not sponsored or favored by the Department but consultation was had with the officials of this and other departments regarding it prior to its introduction. The bill made progress in the Assembly but failed of passage in either house.

On the basis of the number of bills introduced, there seems to have been more interest this session in the general subject of insanity as a ground for divorce or annulment of marriage than for a number of years past. There were no less than five separate bills introduced. One was passed providing that action to annul a marriage when one of the parties was a lunatic at the time thereof, may be maintained by either party. The old law provided that such action may be maintained only by the lunatic or a relative who has an interest to avoid the marriage. This bill became Chapter 83 on approval of the Governor. Another bill provided for incurable insanity as a ground for divorce under certain conditions. This bill made no progress. Another bill making similar provision for annulment and providing that if the insane spouse be the wife, provision must be made for her suitable care and maintenance was passed. This bill was signed by the Governor, becoming Chapter 589 of the Laws of 1928. Another bill which made progress but failed of passage added in the Civil Practice Act "insanity" to several other causes for absolute divorce. The interpretation of the term is not included in the bill. This bill failed of passage.

CORRECTION AND PRISON LAW

A bill amending the Corrections Law generally, failed of passage.

Chapter 812 of the Laws of 1911, an act establishing a farm and industrial colony for tramps and vagrants, was repealed. The property of the colony in the town of Beekman, Dutchess County, has for the past several years been under the supervision of the Hudson River State Hospital. This repeal bill became Chapter 85 of the Laws of 1928.

UNIQUE EXPERIENCES OF VERMONT STATE HOSPITAL IN THE GREAT FLOOD

The trying experiences through which the Vermont State Hospital at Waterbury passed during the unprecedented flood last November were graphically described by Dr. E. A. Stanley, superintendent, in an article recently in "The Vermonter."

The following is a brief abstract of Dr. Stanley's account of what happened:

After an especially heavy rainfall, on Saturday, November 3, 1927, the Winooski River began to overflow its banks at 5 p. m. Twenty minutes later, the chief engineer of the hospital reported that water was pouring into the tunnel leading from the power house to the hospital building and that it would be necessary to shut off both heat and lights in a short time. An immediate request was made for all the flashlights that could be procured at local stores and a general call was made for all patients in the kitchen and dining rooms to be returned to their respective wards. In a few moments the lights were cut off and the building was in darkness. When the flashlights arrived, they were distributed to the wards and elsewhere about the building. The basements rapidly filled with water and it became evident that the Winooski River Valley was facing an unprecedented situation. It was decided, therefore, to move all the patients from the first floor wards to those above. Each patient took his mattress, bedding and clothing and went to the upper ward and camped in the corridors and day halls. This movement was accomplished without confusion and had been completed before any water came on to the first floor.

A detail of patients at the barn under the supervision of the farm superintendent and his assistants, was cut off from returning to the hospital and had to make the barn their lodging place for several days in order to relieve the congestion in the main building. Two patients who had gone to the laundry to take care of baskets of clothing left from the day's work, were cut off from returning to the hospital, but subsequently found a place of safety. The two night engineers who remained in the power house until the very last minute, in order to protect this vital part of the hospital, were obliged to seek safety by climbing to the top of the boilers and were finally driven from this position to the upper side of the smoke flue just beneath the roof.

When the patients had been relocated, there ensued long hours of speculation during which frequent measurements of the water were made and it was found that it was rising at a fairly constant rate, one foot an hour. The

peak was reached at 4:20 a. m. Friday, and there was found to be a little over six feet of water in the main buildings, 12 inches above the second floor of the female nurses' home and four feet above the second floor of the tubercular building. The water receded at practically the same rate and by early afternoon, it was possible to get from one building to another.

A check-up disclosed that the male tuberculosis building which sets at a six-foot lower level than the main building, was the only ward that had experienced serious difficulty. Here the transfer of the patients to the second story was accomplished without difficulty but later in transferring into the attic one patient was missed. This patient had heart disease and the strain proved too great for him.

The hospital suffered severe losses: One wall of the generator room of the power house was forced in by an immense quantity of debris. Fortunately, however, a hay barn or a large quantity of hay, struck the building first and covered the new generator so that when the wall of brick fell upon it no serious damage was done. The laundry building was badly wrecked when the north wall was carried away taking with it some of the equipment. Every one of the 121 Holstein cows were drowned in their stalls and the barn was severely damaged. Three pairs of horses were drowned and three pairs saved.

Throughout Thursday night and Friday there was a good supply of water although it had a suspicious taste of surface water. An examination Friday evening revealed that the supply was cut off.

Dr. Stanley wrote that four major problems presented themselves for solution, namely, food, heat, light and water. The only food available was eight or nine cans of milk for 872 patients and 180 employees. This milk had been carried to the chapel the night before, it being impossible to take it to the kitchen. Before this was distributed, a boat load of milk came from a stranded milk train on the railroad tracks opposite the hospital grounds. Later supplies of milk came from other sources. On Saturday, the local bakery sent bread, and relief headquarters in neighboring villages, sent hot coffee and soup. The range in the hospital kitchen was put into use on Sunday and on Monday, bread was brought in from Burlington in generous quantities, also pressed ham and canned goods. Thus, the acuteness of the situation was relieved.

Because of the water running into the tunnel between the power house and the hospital building, at the inception of the flood, the re-establishment of heat presented the greatest handicap. The Morrisville fire department used their fire engines to pump out the water, but it ran into the tunnel as fast as it could be pumped out. The water had subsided by Tuesday so that the heat could be turned on in the north wing, by Wednesday in the center

wing and by Friday in the south wing. Mild weather aided materially in restoring the heating system which was equipped with motor driven fans. These had become submerged and it took time for them to dry out.

Dr. Stanley gave a great deal of credit to his neighbors for the relief they extended. The People's Hydro-Electric Co. sent two men skilled in generator and switchboard work, to work night and day on the electric plant.

Water was brought to the hospital by trucks in milk cans from Waterbury Center. The water system was not re-established until November 13.

Major Lee and a detachment of the United States Army brought blankets and medical supplies on Saturday night, November 5, and the next day the main detachment brought more blankets, army cots and woolen underwear. From this source, there were provided 1,200 extra wool blankets to offset the lack of heat.

The American Red Cross was on the scene early. Through the Smuggler's Notch pass on Saturday night came a representative group of business and professional men from Burlington, bringing supplies.

Then followed the big task of cleaning up after it was all over. "In the immediate reconstruction," Dr. Stanley said, "the first duty was to shovel out the immense quantities of slimy, sticky mud. It was everywhere that water reached. For this task, the Burt Brothers of Stowe offered the services of their organization and on Monday morning, November 7, they came with a force of 135 men from Stowe and Morrisville, equipped with shovels and wheelbarrows, and continued daily at this work for two weeks."

The article evinces what all of Dr. Stanley's friends have known for many years, namely, that he is a man of modesty. For, reading between the lines, the thought obtrudes itself on the reader, that throughout the ordeal the man at the helm kept his head and by his conduct and his efforts to maintain order and secure the safety of all, inspired confidence and heroic service on the part of his subordinates. Of his own acts, he says nothing. Of the fidelity of his employees he writes as follows:

"The flood came at a time when the entire personnel of the hospital employees was on duty which made it possible to care for the patients without delay. The devotion of the employees was very inspiring as all of them remained to care for the patients during the reconstruction period and under conditions that would have discouraged less faithful individuals."

NEW PSYCHIATRIC HOSPITAL OF UNITED STATES VETERANS' BUREAU AT NORTHPORT, L. I.

In a picturesque setting, on rolling land, part of which is the highest on Long Island, admirably adapted for the treatment of persons suffering from nervous and mental disease, the new United States Veterans' Hospital at Northport, was opened on April 16, 1928, for the reception of patients. The location commands a view of a considerable strip of the Island and of the Sound and the opposite shore of Connecticut.

The State Department of Mental Hygiene, issued a temporary license to the hospital on March 21. The certified capacity was fixed at 717 patients. Eventually, however, the hospital expects to be able to accommodate 1,000 patients. The construction has not yet been completed.

Dr. George F. Brewster, formerly head of Veterans' Bureau Hospital No. 81, in the Bronx, New York City, will be in charge of the new institution.

Although the institution will be conducted by the United States Veterans' Bureau and treat veterans of the World War suffering from mental diseases, it will, at all times, be conducted as a licensed institution in accordance with the provisions of the Mental Hygiene Law of the State of New York and the rules and regulations established thereunder. The patients will be brought from various contract institutions where they are now housed in the states of New York, New Jersey and Connecticut.

The Northport site was selected from among 250 other plots examined in this State, Connecticut and New Jersey by a committee composed of General George A. Wingate, Dr. Henry A. Cotton, superintendent of the New Jersey State Hospital at Trenton and the late Dr. Thomas W. Salmon. The site comprises 550 acres, much of it woodland and cost \$193,000. It is located just outside the village of Northport and is served by the Long Island Railroad.

The hospital buildings are 27 in number and when all are completed, they will have cost approximately \$4,000,000. They are of concrete, skeleton frame construction with concrete floors, brick curtain walls and tile partitions. They have slate roofs and are fireproof throughout. The residential section consists of four buildings which are of frame and brick construction. All are guarded by a complete water supply system of high pressure mains scattered at advantageous points throughout the grounds. The institution is further protected by improved fire department apparatus in charge of trained personnel. All buildings are equipped with standpipes and fire hose in cabinets at convenient places.

The lighting system in all buildings conforms to the national electric code. The system of heating and ventilating consists of a central heating plant

with 350 h. p. boilers with a guaranteed over-rating of 100 per cent. The plumbing consists of the latest loop vent system and conforms in all respects to plumbing codes of the various eastern states.

The water supply system consists of two deep artesian wells pumped to a gravity tank of a capacity of 200,000 gallons, which, in turn is distributed through high pressure mains and reduced at the various buildings as needed.

The institution's sewage disposal plant is of the latest type and includes filtration basins, sedimentation tanks and water aerating system. It is said to be ample for a population of 25,000 persons.

The buildings so far completed, may be briefly described as follows: Administration building; receiving ward with various clinics and laboratories; main kitchen and dining-room; recreation building; acute building and four continued treatment buildings.

In their outward aspect, the buildings give no indication of the true purposes of the institution. There are no barred windows, no iron railings, and no high walls to indicate confinement. Ornamental exterior balcony grills covering most of the lower sashes give the appearance of a modern up-to-date hotel. Covered corridors connecting all the buildings housing patients with the dining hall, form a huge court, which, while serving the purpose of walls, adds to the attractiveness of the place.

One of the most interesting features of the Northport institution is the recreation building. This is 144 feet by 56 feet with a circular rotunda in the center of one side and a large lobby at each end. In addition to bowling alleys, pool and billiard tables, and other facilities for recreation, there is an auditorium to be used as a chapel for religious services and also for social events, lectures and similar purposes.

In addition, the institution proposes to set aside a plot of 50 acres where patients who are agriculturally inclined, may carry out their hobbies by cultivating crops or raising stock, thus helping to provide for the hospital table.

Occupational therapy and vocational activity such as weaving, the making of leather articles, cabinet making and other branches of carpentry, will be encouraged, experience having proven that such activities are very helpful to mentally diseased veterans. The Federal Government will furnish the working materials and good results are expected to follow at Northport, just as they have at other institutions where the work for the veterans has been specialized.

In general, it can be said that in the Northport institution, the lessons and experience gained from other hospitals have been incorporated and it represents the latest word in its particular type of construction. Special sound insulating material has been provided in ceilings of corridors to

eliminate echoes which are so disconcerting to some nervous types of patients. Diffused lights, located near the floor have been installed so as not to arouse patients, yet permit doctors, nurses and attendants to examine the interior of the rooms through circular windows and doors. In some buildings, there are shaded green tile walls which will be soothing to the eyes as well as to the nerves.

As has been said, the location of the institution and the arrangement of the buildings are most attractive. The main entrance to the grounds is from the Middleville road, which, when concreted, will afford excellent automobile travel all the way through the Island from New York City. Entering the hospital grounds, the first buildings seen are those set apart for the medical officers and other officials. The first is the medical officers' quarters, a structure 27 feet by 45 feet in area. Then come three duplex houses, each accommodating two families, which are the officers' quarters. Next, is a two-story apartment on a plot 90 feet by 35 feet, with three apartments on each floor, occupied by medical officers. Each apartment consists of a bedroom, living room, dining room and kitchen. The laundry is located in the basement. Every convenience is supplied including electrical refrigeration.

The nurses' quarters, adjoining the apartment building, is a three-story structure, covering ground space 37 feet by 146 feet and having 66 individual rooms with a reception room on the ground floor. Within a short distance are quarters for the attendants, which are in two buildings of the same dimensions as the nurses' building; one for men and the other for both men and women.

In the hospital group itself, certain features have been embodied in the design of buildings which represent an advance over what has been previously provided in veterans' hospitals for the care of mental diseases. Some of these involve improvements in basic design or arrangement or co-ordination of the various hospital activities which are unique in so far as bureau hospitals are concerned. Certain others include refinements of detail to better adapt the buildings to the purposes for which they are to be used. Certain others represent an improvement in the selection of materials over what the Veterans' Bureau has previously been able to accomplish with funds available.

Reference has been made to the grouping of the buildings and the covered corridors connecting them, this treatment furnishing ready and convenient means for communication in all kinds of weather. This is new in so far as bureau hospitals are concerned.

The administration building is built on a plot 36 feet by 100 feet and is two stories in height. As its name indicates, it will provide offices for all the medical officers and in it will be transacted all the business relating to the

hospital. The main infirmary is a building 119 feet long, with wings 33 feet wide, extending 92 feet, and three stories high. There is in the building, an operating room on the top floor, with all modern appliances and into which an elevator opens. From this floor, one may gaze not only on Long Island, but over the Sound to the hills of Connecticut on the north. On the ground floor, are a barber shop, which will be conducted by the bureau; an autopsy room, hydrotherapy and electrotherapy rooms and a general library. There are four 13-bed wards, a like number of 18-bed wards and 100 small rooms for patients.

One of the most commanding buildings of the group is that for acutely disturbed cases. The building is 224 feet long by 139 feet wide and three stories in height. The windows are protected by ornamental exterior balcony grills and steel frames. The lower sashes cannot be raised above the grills, while the upper sashes cannot be lowered more than a foot. Complete equipment for medical treatment has been provided in the basement of the building. In addition to all this, a swimming pool 15 feet 9 inches wide by 40 feet long has been installed. It has been made more shallow than pools in gymnasiums, ranging only from four to five feet in depth. This feature has been included because it has been demonstrated that patients, particularly of the disturbed class, are materially benefited by the use of such a pool. This building contains 75 rooms and 2 wards each with 4 beds.

There are four continued treatment buildings similar in type. These are for general cases. They have wings at each end, affording ample sunlight and ventilation to all rooms and for the convenience of patients who cannot go to the main dining room, they are equipped with small kitchens and dining rooms. Each building is therefore a small hospital in itself, accommodating several hundred patients. In each wing, there is a radio room in charge of an attendants and loud speakers are to be installed in the wards and earphones provided for bedridden patients.

It may be interesting to note wherein the Northport Hospital is different from bureau hospitals heretofore constructed. Day rooms and porches in the new hospital are of more generous proportions than it has been customary to provide in previously designed bureau hospitals. Also, there has been made a more generous provision for hydrotherapy equipment. This department which will be used for the entire institution, is located in the south end of the west wing of the basement of the main infirmary building and is accessible not only to the patients in the building, but to the patients who may be located in any of the continued treatment buildings.

The kitchen and dining hall building is an unusually large structure, 152 feet by 38 feet, while between these are two other rooms each 70 feet by 62 feet, one for attendants and the other for doctors and nurses.

The entire hospital plant will be operated and heated by oil. For this purpose, two oil tanks with a capacity of 50,000 gallons each, or a total of 100,000 gallons, have been installed. The oil will be brought into the tanks through a 5-inch pipe, 4,000 feet long, running from a three-car spur from the Long Island Railroad tracks. No pumping will be required, as the oil will flow by its own gravity the entire distance. Parallel to the oil pipe, there will be a steam pipe to heat the oil and facilitate its flow. To protect the oil tanks from fire, there will be a smothering line, so in case a blaze should get started, steam may be turned on immediately, thus putting out the flames.

It is interesting to note that at the entrance to the hospital grounds, is a dwelling apparently a century or more old which is to be repaired and furnished as a hospitality house where relatives of patients may be accommodated over night.

The contractor for the general construction of the hospital is Algernon Blair of Montgomery, Ala., whose contract was awarded at \$2,725,000. The plumbing and heating contractor is the Virginia Engineering Company of Newport News, Va., whose contract called for \$600,000. Other work being done by sub-contractors, brings the total cost to approximately \$4,000,000.

The director of the U. S. Veterans' Bureau, which maintains and operates 54 hospitals throughout the United States, and is furnishing hospital treatment to an average of 27,000 patients, of whom 13,000 are of the nervous and mental type, is Gen. Frank E. Hines, who is represented in New York by M. E. Head, of Long Island. The construction work is under the direction of Col. L. H. Trip, and government engineers on the project are: R. J. Beall, supervising superintendent in charge of construction; E. M. Shearer, in charge of mechanical installation; Walter N. Gordon, Benjamin F. Stewart, Joseph Halter, Col. T. Harry Shanton and Hugh Brammer.

THE TREATMENT OF NEUROSYPHILIS BY MALARIA IN THE UNITED STATES VETERANS' BUREAU

Dr. Philip B. Matz, chief of the Research Division of the Veterans' Bureau, has compiled statistics on the treatment of neurosyphilis by means of "inoculation malaria" based upon the data received from a number of U. S. Veterans hospitals. There were 346 patients so treated; the longest period of observation was 47 months, this included preliminary anti-syphilitic and post-malarial treatments of various kinds; the average period of treatment for the whole series of cases was 27 months.

The treatment in vogue consisted of the intravenous injection of about 2.3 cc. of malarial blood. The patients were carefully selected and none were chosen for the treatment who had certain well-defined contraindications such as cardio-vascular diseases, nephritis, active pulmonary tuberculosis, etc. In each case permission was obtained from either a member of the patient's family or from his guardian. He was allowed to have approximately 12 paroxysms and was then placed on quinine. Afterwards the patient was given about one month's rest. This was followed by anti-syphilitic treatment.

The incubation period varied from 1 to 19 days; the average period of incubation was 6.5 days. The highest temperature reported was 42 degrees C; the lowest was 36.7 degrees C; the average temperature was 39.4 degrees C.

Of the total number of patients inoculated with malarial blood, 5.4 per cent failed to develop the infection and were considered immune to the malarial plasmodium. Some of the complications noted by the bureau observers were mild jaundice, nausea, vomiting, loss of appetite, loss of weight, edema of ankles, anemia, incontinence of urine and feces, convulsive seizures, delusions, and restlessness. Forced termination of the treatment was necessary in a number of cases on account of rapid emaciation, intense vomiting, persistent high temperature, or severe anemia. Most of the bureau patients lost weight during the treatment, but regained the same after cessation of the paroxysms. There was an average loss of 8.2 pounds during the treatment. The average gain of weight subsequent to treatment was 17.4 pounds.

In the treatment of the bureau patients by "inoculation malaria" it was noted that the manic and expansive types of paresis were more amenable than the demented type. Besides paresis the bureau patients carried diagnoses of taboparesis, cerebrospinal syphilis, and tabes.

Of 346 cases treated, 23.99 per cent were greatly improved; 41.04 per cent

were improved; 22.83 per cent remained unimproved; 7.51 per cent became deteriorated, and 3.47 per cent died.

Following this treatment the cytology of the spinal fluid was benefited in 81.72 per cent of a series of 279 cases under observation; the blood Wassermann became negative or was modified in 72.04 per cent; the globulin became negative or was reduced in 69.89 per cent; the spinal fluid Wassermann became negative or was modified in 59.85 per cent, and the colloidal gold curve was favorably modified in 54.58 per cent of the cases.

The conclusions reached in the study were that as the result of the combined anti-syphilitic and malarial treatment of neurosyphilis the clinical course is favorably affected and the prognosis of such diseases as paresis, taboparesis and cerebrospinal syphilis is changed to a more hopeful status. Clinical improvement following this treatment is accompanied by favorable laboratory findings, both in the blood and spinal fluid. The favorable results obtained are attributed by Dr. Matz to the average age of the bureau beneficiaries under treatment for neurosyphilis (37), the early diagnosis, the persistent intensive anti-luetic treatment and excellent care which these patients receive in the bureau hospitals.

SITE PURCHASED FOR NEW STATE HOSPITAL

The State Office Site and Building Commission exercising authority granted by Chapter 77 of the Laws of 1927, has purchased 1,000 acres of land near Brentwood, Long Island, for a site for a new State hospital for mental disease. The property was acquired from the No. 160 Remsen Street Corporation of Brooklyn. The institution to be built on the site will probably be known as the Brentwood State Hospital. Such hospital when complete will probably accommodate about 10,000 patients and is expected to cost upwards of \$20,000,000.

The site is 37 miles by air line from the New York City Hall. It lies toward the southern shore of Long Island. The tract is admirably suited for institutional purposes. The ground is practically level and suitable for cultivation. The topography of the site as well as the sandy quality of the subsoil are such as to make possible the construction of a modern and serviceable drainage system. An ample supply of water by driven wells is assured anywhere on Long Island. Prior to the purchase, the former owners arranged to donate to the State for parkway purposes a 160-foot strip running through the property in a north-south direction. This will make the land more accessible for automobile users and tends toward the further development of the district. The site can be reached by a spur of about 5,000 feet from the Long Island Railroad.

Exclusive of the cost of the property, there is available for construction of the new hospital \$1,700,000 appropriated by the Legislature of 1928. It is anticipated that before the end of this year, contracts can be awarded for at least two buildings for patients, kitchen and dining room facilities and a heating plant.

Commissioner Parsons in announcing the purchase summed up the situation as follows: "The need of an additional State hospital to serve the metropolitan area is obvious. The State has for New York City residents four hospitals now and two in development in addition to this proposed hospital. Those at Ward's Island, Kings Park and Central Islip though large, are overcrowded and such overcrowding will not be fully relieved by the institution at Wingdale now partly occupied, nor the Rockland State Hospital in Rockland County, construction of which was begun one year ago. The Brooklyn State Hospital, together with its Creedmoor Division, occupy restricted sites and are not capable of great expansion. New York City grows and will continue to grow. The State is obliged to anticipate the increase of the urban population and the counties on Long Island near the City of New York will lead in the growth."

"The Brentwood site is accessible to New York City and will relieve the overcrowding in the other hospitals in the metropolitan district. It is ideally situated and has railroad facilities for the accommodation of visitors and the transportation of supplies, and provision easily can be made for expansion. When completed the institution will be a self-contained village of patients, physicians and employees and will be an economic asset to the community. In no instance has the presence of a State hospital failed to raise property values or to contribute to the local prosperity."

NEW CIVIL SERVICE LIST FOR STATE HOSPITAL SUPERINTENDENT

The following list of eligibles for superintendent of a State hospital or medical inspector was established by the State Civil Service Commission on February 4, 1928, as a result of a competitive examination held November 19, 1927.

Dr. Isaac J. Furman, Ward's Island.
Dr. Wm. W. Wright, Utica.
Dr. Russell E. Blaisdell, Kings Park.
Dr. Philip Smith, New York.
Dr. John A. Pritchard, St. Lawrence.
Dr. Ralph P. Folsom, Ward's Island.
Dr. Christopher Fletcher, Buffalo.
Dr. Frank R. Haviland, Brooklyn.
Dr. David Corcoran, Creedmoor.
Dr. Willis E. Merriman, Hudson River.
Dr. Charles E. Rowe, Hudson River.
Dr. Charles S. Parker, Kings Park.
Dr. Hyman L. Levin, Buffalo.
Dr. Charles L. Vaux, Central Islip.
Dr. Willard H. Veeder, Rochester.
Dr. Raymond Wearne, Central Islip.
Dr. Harry J. Worthing, St. Lawrence.
Dr. August E. Witzel, Brooklyn.
Dr. Milton M. Grover, Wingdale.
Dr. Blakely R. Webster, Dannemora.
Dr. Clarence H. Bellinger, Utica.
Dr. Harry A. Steckel, Binghamton.
Dr. John F. McNeill, Matteawan.

From the above list Dr. Isaac J. Furman has been appointed superintendent of the Buffalo State Hospital and Dr. Philip Smith has been appointed medical inspector.

NOTES

—According to data furnished by E. S. Gosney, of Pasadena, California, the state hospitals of California had sterilized 5,280 mentally defective and mentally diseased persons up to January 1, 1928.

—A Department of Mental Hygiene has been included in the program of the Los Angeles, California, public schools. It comprises a psychological clinic, counselor service, special classes for different types of atypical children, special teaching material for such classes and a demonstration nursery school.

—Clifford W. Beers, secretary of the National Committee for Mental Hygiene, has recently announced the receipt of an anonymous gift of \$50,000 for use in connection with the holding of an International Congress on mental hygiene in Washington in 1930.

—Dr. Edward N. Brush, editor of the American Journal of Psychiatry, will take a vacation in Europe from April until about the middle of September, 1928. Dr. Harry Stack Sullivan, one of the associate editors, will have charge of the magazine during Dr. Brush's absence.

—The fifty-fourth annual meeting of the American Neurological Association will be held in Washington, D. C., May 1-3, 1928. Several of the most distinguished neurologists of the country will address the meeting and a wide range of topics will be discussed. The association headquarters will be at the Mayflower Hotel. The president of the association is Dr. Charles L. Dana and the secretary, Dr. Henry Aslop Riley, both of New York City.

—Dr. B. W. Black, who has been medical director of the United States Veterans' Bureau for the past two years, has resigned to become superintendent of hospitals in Alameda County, California. His resignation will take effect May 17, 1928. He will be succeeded in the Veterans' Bureau by Dr. E. O. Crossman, a former medical director who had recently been appointed medical officer in charge of the new Veterans' Bureau Hospital at Northport, L. I.

—The fifty-second annual meeting of the American Association for the Study of the Feeble-minded will be held in Haddon Hall, Atlantic City, N. J., May 31 and June 1 and 2, 1928. An exhibit relating to the study, care and training of mental defectives will be held in connection with the meeting. The officers of the association for the current year are: Edward R. Johnstone, Sc. M., president; George E. McPherson, M. D., vice-president; Howard W. Potter, M. D., secretary-treasurer.

—The U. S. Veterans' Bureau in General Order No. 348-C interpreting the provisions of Section 232 of the World's War Veterans' Act of 1924, sets forth the following interesting definition of an insane person:

"For general purposes an insane person or lunatic may be defined as a person (not mentally defective or constitutionally inferior, except those cases in which a psychosis has been grafted upon the basic condition), in whom there exists, due to disease, a more or less prolonged deviation from his normal method of behavior and who is therefore incapable of managing his own affairs or transacting ordinary business, or who is dangerous to himself, to others, or to property, or who interferes with the peace of society, or who has so deviated (become antisocial) from the accepted standards of the community to which by birth and education he belongs, as to lack the adaptability to make further adjustment to the social customs of the community in which he now resides."

—The eighty-fourth annual meeting of the American Psychiatric Association will be held at Hotel Radisson, Minneapolis, Minn., June 4-8, 1928. The Section on Convulsive Disorders, formerly the National Association for the Study of Epilepsy, will hold its special sessions on Monday, June 4, and the opening of the general session of the Psychiatric Association will be at 10 a. m., on Tuesday, June 5. The American Psychoanalytical Association and the American Psychopathological Association will also meet in Minneapolis between June 5 and June 8. Elaborate preparations for these meetings have been made by the local committee. The officers of the association for the current year are: Adolf Meyer, M. D., president, Baltimore, Md.; Samuel T. Orton, M. D., vice-president, Columbus, O.; G. Kirby Collier, M. D., honorary vice-president, Rochester, N. Y.; Earl D. Bond, M. D., secretary-treasurer, Philadelphia, Pa.

—Through the joint efforts of the National Association for the Study of Epilepsy, the National Committee for Mental Hygiene and the New York State Department of Mental Hygiene a new uniform system of statistics has been prepared and adopted for use in institutions for epileptics throughout the country. A statistical manual has been printed and statistical cards and tabular forms have been prepared and will soon be made available for use by the institutions.

—Under the reorganization law adopted last year, the government of the State of California will hereafter consist of nine departments. The directors of these departments will constitute the Governor's Cabinet. The institutions of the state are placed under the general supervision of the Department of Social Welfare. This department consists of three divisions, namely, 1. The Division on Inspections and Social Studies; 2. The Division on Children's Work; 3. The Division on County Relations and Care of the Aged.

—The State Board of Control of Institutions and Agencies of the State of New Jersey has recently prepared a practical program for meeting the problem of care, treatment and preventive work for the insane in that state. The program involves:

1. Continued efforts to transform the mental hospitals into truly modern curative institutions, with ample facilities for research into the treatment, cure, and causes of mental disorders.

2. Expansion of the social service or follow-up field work to enable the hospitals to parole early under proper conditions and safeguards an ever-greater number of patients who can be satisfactorily adjusted in the community.

3. Continued extension of mental clinics in the communities for the diagnosis of mental and nervous disorders, to reach potential sufferers before definite mental disorders appear.

4. The establishment by local communities of psychopathic departments in general hospitals.

5. The building of a new State hospital to reduce the overcrowding which now amounts to about 2,000.

—The Council of the American Neurological Association is making preliminary plans for an International Neurological Congress to be held in Europe in the summer of 1931. The committee representing the council in the matter consists of the following prominent neurologists: Dr. B. Sachs, New York, chairman; Dr. Charles L. Dana, New York; Dr. Frederick Tilney, New York; Dr. Theodore Weisenburg, Philadelphia; Dr. Henry Alsop Riley, New York.

—Stony Lodge, at Ossining, N. Y., a new private institution for the care of mental patients, has recently been opened by Dr. Bernard Glueck, formerly senior assistant physician, Saint Elizabeth's Hospital, Washington, director of the Psychiatric Institute at Sing Sing Prison, and director, Department of Mental Hygiene and Bureau of Children's Guidance, New York School of Social Work. The new institution accommodates 12 patients. For the present Dr. Glueck is limiting himself to the intensive treatment of early schizophrenies and mild depressions.

—The thirteenth annual convention of the Catholic Hospital Association of the United States and Canada and the second annual Hospital Clinical Congress of North America will be held in the Cincinnati Music Hall, Cincinnati, Ohio, June 18 to 22, inclusive, 1928. The fourth annual convention of the International Guild of Nurses will be held at the same time, in the same building, at night meetings.

A professional program of the highest interest and value is now being formulated, and all persons interested in medical and hospital service are cordially invited to attend. Further information may be obtained from John

R. Hughes, M. D., dean of the College of Hospital Administration, Marquette University, Milwaukee, Wisconsin, who is general chairman of the convention and congress.

—A second intensive post-graduate course in neurology and psychiatry will be held in Vienna during the coming summer. The maximum number of physicians to constitute the post-graduate class will be 15 and the minimum number eight. The courses held in 1927 proved to be very successful.

—Miss Elizabeth Farrell, supervisor of ungraded classes in the New York public schools, at a recent meeting of the National Consumers' League in New York City, made the statement that 38 out of every 100 pupils were "misfits" in the present educational system.

"Our schools are huge factories," she said, "where children are expected to be ground out of one grade and into another every five months. The emphasis is upon the acquisition of facts, and the necessity for a change of behavior on the part of the children is not recognized.

"The results are typified in one school near here where 40 per cent of the children are over age for their grade. Retardation, the failure to be promoted, bring humiliation of failure, then rebellion and an egress of truants to the streets."

—The Ninth International Congress of Psychology will be held at Yale University in New Haven, Connecticut, U. S. A., probably in August or September, 1929.

The officers of the Congress are as follows: President, J. McKeen Cattell of New York; vice-president, James R. Angell of Yale University; secretary, Edwin G. Boring of Harvard University; treasurer, R. S. Woodworth of Columbia University; foreign secretary, Herbert S. Langfeld of Princeton University; executive secretary, Walter S. Hunter of Clark University; chairman of the Program Committee, Raymond Dodge of Yale University; chairman of the Committee on Arrangements, R. P. Angier of Yale University. This is the first meeting of the Congress in America. The previous meetings have been as follows: Paris, 1889; London, 1892; Munich, 1896; Paris, 1900; Rome, 1905; Geneva, 1909; Oxford, 1923; Groningen, 1926.

A VICIOUS CIRCLE

and the proper point for its attack

IS CONSTIPATION a cause or an effect? This question is occupying much attention among physicians today, for constipation and all the symptoms surrounding it continue to occupy as large a place as ever in human life and in the doctor's daily practice.

"Constipation is like a headache," argues one authority, "simply a symptom of some underlying physical error or improper habit of personal hygiene." Worry, inadequate exercise, faulty eating habits, or the habitual use of laxative drugs—these are all influences which produce intestinal impairment.

But if constipation is an effect, it is also a cause. It often causes indigestion, heartburn, bad taste, acid eructations, suppurative diseases of the skin. Careful investigators have concluded that chronic cases of constipation almost invariably produce serious affections of the nervous system—irritability, headache, insomnia, melancholia and what perhaps might be termed *mental stasis*.

CAUSE and effect—action and reaction—a vicious circle. Somewhere the physician must step in and break it up. The authorities cited above point out that thorough investigation of the intestinal tract is essential. The treatment for constipation,

they assert, is often all that is required to correct neurasthenic conditions—"A proper hygiene and therapy of the intestinal tract will often be the deciding factor in differential diagnosis."

For a laxative that does its work easily and naturally many physicians recommend fresh yeast.

Yeast has these advantages: It tends to soften the fecal masses and to increase their bulk and moisture. It diminishes putrefaction and gently stimulates the bowel muscle to perform its function—precisely opposite to the effect of cathartics.

WHILE investigation has shown, in the words of one authority, "that intestinal antiseptics diminish the ability of the intestine to destroy bacteria" the action of fresh yeast is just the contrary. Eaten daily in sufficient quantity, yeast combats the development of hostile types of bacteria in the intestine.

The action of yeast in increasing the number of white cells in the blood accounts for greater resistance and the well known efficiency of yeast in the treatment of acne, boils and other skin diseases.

Physicians usually suggest three cakes daily, one before each meal or between meals. Yeast may be eaten just plain or suspended in milk or water—hot or cold—or any other way the patient prefers. For constipation it is most effective when dissolved in hot (not scalding) water, one cake before each meal and at bedtime.

A copy of the latest brochure on yeast therapy containing a bibliography of articles and references on the subject will gladly be mailed on your request. The Fleischmann Company, Dept. 327, 701 Washington St., New York City.

FOR THE TREATMENT OF PNEUMONIA

The vaccine treatment of pneumonia has not given very satisfactory results. With the purpose of obviating the chief difficulty in the vaccine therapy of this disease, namely tardiness of action, Parke, Davis & Co., have brought out a new antigen, one that represents the vaccine principle but acts much more rapidly. It is called *Pneumococcus Immunogen*.

Vaccines are killed bacteria. *Pneumococcus Immunogen* is obtained from cultures of the three specific types of *pneumococcus*, but there are no bacteria, dead or alive, in it. It seems, from the researches conducted and published by Parke, Davis & Co., that the antigenic principle of bacteria is not so much *in* the bacteria as *on* them; it can be washed off. *Pneumococcus Immunogen* consists of the washings of pneumococci, tested serologically to demonstrate its superiority to a corresponding bacterial vaccine.

The Immunogen is administered, as a rule, intramuscularly, though it can be given intravenously in smaller doses; and the injections may be repeated at intervals of four or five hours.

Literature on *Pneumococcus Immunogen* is offered to physicians by Parke, Davis & Co.

HYPEREMIA AS A THERAPEUTIC AGENT

The importance of hyperemia, both active and passive, has long been recognized in therapeutics and various are the methods that have been employed in order to realize it in a more or less efficient manner. The surgeon, August Bier, in his important work, "Hyperemia as a Therapeutic Agent" (1903), maintains that localized hyperemia of the surface induces hyperemia of the depth even down to the bone; that this hyperemia is not detrimental but distinctly remedial. Blood brings to the part materials for repair, which are obviously needed in greater quantities by diseased than by normal tissues; and it brings antibacterial forces to bear on the focus of infection.

Applied hot and thick over and beyond the affected area Antiphlogistine has, by virtue of its thermogenetic properties, distinctly analgesic, bactericidal, absorptive, solvent and nutritional effects with a stimulation of phagocytosis. The hyperemia produced by this plastic, anodyne dressing is moderate and continuous and is provoked by the powerful hygroscopic properties and by the moist heat it generates and maintains. That the Antiphlogistine treatment of inflammatory and congestive conditions is remedial through the induction of active hyperemia is now a matter beyond question or doubt.